

# HARVARD SEMITIC SERIES

EDITORIAL COMMITTEE

JAMES RICHARD JEWETT  
DAVID GORDON LYON  
GEORGE FOOT MOORE

LONDON: HUMPHREY MILFORD  
OXFORD UNIVERSITY PRESS

HARVARD EXCAVATIONS  
AT SAMARIA

1908 — 1910

BY

GEORGE ANDREW REISNER  
CLARENCE STANLEY FISHER  
DAVID GORDON LYON

VOLUME I. TEXT

CAMBRIDGE  
HARVARD UNIVERSITY PRESS  
MDCCCXXIV

Copyright, 1924  
HARVARD UNIVERSITY PRESS

*Printed in U.S.A.*  
*Press of Geo. H. Ellis Co. (Inc.), Boston, Mass.*



155548  
IN GRATEFUL MEMORY  
OF  
JACOB HENRY SCHIFF  
GOOD CITIZEN  
PHILANTHROPIST OF BROADEST SYMPATHIES  
GENEROUS PATRON OF LEARNING  
AND ARCHÆOLOGICAL  
RESEARCH

## EDITORIAL NOTE

The excavations described in the present volumes were made in the years 1908 and 1909-1910, under the direction of Doctor Gottlieb Schumacher in the first year, and, in the subsequent years, of Doctor George Andrew Reisner, with Mr. Clarence Stanley Fisher as architect associated with both directors. The material for the year 1908 has been in hand since 1909, and the report of the work in 1909-1910, substantially complete, was received in 1913. The long postponement of publication, due to various untoward circumstances, is deeply regretted by the editors, above all because the death of Mr. Schiff in the interval (September 25, 1920) deprived the generous patron of the expedition of the satisfaction of seeing in print the results of his undertaking.

Mr. Schiff not only bore the entire expense of the expedition, but made also what was considered ample provision for publication. The great increase in the cost of printing carried the outlay much beyond these estimates. When this was reported to his son, Mr. Mortimer Schiff, he and other members of the family responded in the generous spirit of the father.

The history of the work of the year 1908 (Volume I, Part I), written by Professor Lyon, is illustrated by the Figures on pages 13-16, Plans 13-16, Plates 84-90, and certain of the Plates 1-83. The description of objects found (Chapter III) follows, in the main, notes made at the time in the Register by Doctor Schumacher, but departs occasionally therefrom, on the ground of further study of the photographs and sketches. Particularly is this the case in regard to the identification of coins, the reading of Greek stamps on jar handles, and the classification of objects of pottery.

The account of the years 1909-1910 fills all of the first Volume with the exception of Part I. Mr. Fisher prepared all the Plans in Volume II, except those which are credited to Doctor Schumacher. He made also all the Drawings and Figures in Parts II-IV, and wrote the text of Part III (Architectural Remains). Parts II and IV and the account of the Progress of the Expedition (Appendix) were written by Professor Reisner.

Much that was found in the exploratory excavations of 1908 became interpretable only in the light of the discoveries of the following years, and is therefore discussed in connection with the latter, particularly in Part III. Parts II-IV were prepared before the account for 1908, which rendered necessary a different method of disposition and numeration of the material for that year. Inasmuch as the Figures, Plates, and Plans for 1909-1910 were numbered 1, 2, 3, etc., it would have been confusing to the reader if the same method had been employed for 1908. The Figures for that year are accordingly massed on

a few pages (13-16), and cited by reference to page as well as number; and the Plates and Plans for 1908 follow those for 1909-1910 and are numbered consecutively with them, but this inversion of the chronological order will, it is hoped, cause no inconvenience.

An analytical table of the Contents of Parts I-IV is given on pages x-xxv; in Parts II and III a summary of the contents of each chapter is prefixed to it, and suitable headings are given to the important divisions of the text; and in the Appendix three special indexes have been provided, by means of which the reader is enabled to find at once all the passages referring to a given Plate, or to a given object mentioned in connection with its registration number or its discard number. This apparatus will, it is believed, sufficiently serve all the purposes of a general index, which, moreover, owing to the large amount of minute detail, could not be provided, with any approximation to completeness, without enlarging the work to inordinate dimensions.

The photographs, the three colored Plans, and the overlay drawings to Plans 2 and 10 (Volume II) were reproduced by the Heliotype Company, Boston; the plates for the other Plans and the cuts for all the Figures were made by C. J. Peters and Son, Engravers and Electrotypers, Boston. The preparation of the Figures in Part I for the Engravers from the sketches by Doctor Schumacher in the Register is the work of Mr. Alfred T. Granger. With the exception of Part IV, Chapter I (Inscriptions), which was printed by the Harvard University Press, the typography and press-work are by the Geo. H. Ellis Company (Inc.), Boston. The binding of the volumes is the work of the Boston Book-Binding Company.

It is a pleasure to express here our obligations to several friends for valuable assistance. Among these are five Harvard colleagues: In Part I Professor George H. Chase has made useful suggestions regarding the classification of the Pottery, and Professor Albert A. Howard has been equally helpful in the study of the fragmentary Latin Inscriptions. Mr. William Thomson has revised a part of the manuscript for the printers, and Professor Harry A. Wolfson has given generously of his time to the reading of the proof-sheets. Doctor Robert H. Pfeiffer prepared the three special indexes in the Appendix, mentioned above, verified the references to other books, made the list of publications cited, and gathered the material for the list of abbreviations. To Mr. Edward Theodore Newell, of the American Numismatic Society, New York, we are under special obligations for his assistance in identifying the coins in Part I.

The exploration of Samaria is far from complete. Only a small fraction of the space within the wall has been dug up. It is greatly to be desired that excavation on this historic site should be taken up anew. The present administration of Palestine has considerably reserved the site for Harvard University, but can hardly be expected to do this much longer. It would be a source of great gratification if friends of the University and of Palestine should provide the means necessary for resuming the work.

## CONTENTS

	PAGE
EDITORIAL NOTE . . . . .	vii-viii
DETAILED CONTENTS OF PART I (1908) AND PARTS II-IV (1909-1910) . . . . .	x-xviii
LIST OF FIGURES . . . . .	xix-xxv
LIST OF PUBLICATIONS REFERRED TO . . . . .	xxvii
ABBREVIATIONS . . . . .	xxix
ADDITIONS, CORRECTIONS, AND EXPLANATIONS . . . . .	xxxi
PART I. EXCAVATIONS IN 1908 . . . . .	1-28
PART II. METHODS, PRINCIPLES, AND GENERAL RESULTS (1909-1910) . . . . .	29-90
PART III. ARCHITECTURAL REMAINS (1909-1910) . . . . .	91-223
PART IV. ARCHÆOLOGICAL MATERIAL (1909-1910) . . . . .	225-387
APPENDIX . . . . .	389-417
Progress of the Expedition (1909-1910) . . . . .	391-408
A. Diary . . . . .	391
B. Excavation of the several Sections . . . . .	396
Index I. References to Registration Numbers . . . . .	409-414
Index II. References to Numbers of Discarded Objects . . . . .	415
Index III. References to Photographic Plates . . . . .	417

## DETAILED CONTENTS OF PARTS I-IV

### PART I

<i>Chapter.</i>	<i>Page.</i>
I. INCEPTION AND CONDITIONS OF THE WORK . . . . .	3-6
II. SUMMARY ACCOUNT OF THE EXCAVATIONS OF 1908 . . . . .	7-12
Figures belonging to Chapter III. . . . .	13-16
III. DESCRIPTION OF OBJECTS FOUND IN 1908 . . . . .	17-28
I. Inscriptions . . . . .	17-21
A. Aramaic or Hebrew . . . . .	17
B. Greek . . . . .	17-19
a. On Stucco . . . . .	17
b. On Pottery . . . . .	18
c. Jar Handle Stamps . . . . .	18
d. Potters' Marks . . . . .	19
C. Latin . . . . .	19
II. Coins . . . . .	21
III. Pottery . . . . .	22-25
A. Bottles . . . . .	22
B. Cups . . . . .	22
C. Dishes . . . . .	22
D. Figurines . . . . .	23
E. Jars . . . . .	23
F. Handles . . . . .	23
G. Jar Fragments . . . . .	23
H. Jugs, Pitchers, Plates, and Pots . . . . .	24
I. Bowls . . . . .	24
J. Weights and Whorls . . . . .	25
K. Other Fragments . . . . .	25
L. Lamps . . . . .	25
IV. Stone Objects . . . . .	25-26
V. Metals . . . . .	26-27
A. Bronze . . . . .	26
a. Arrow Tips . . . . .	26
b. Bracelets and Rings . . . . .	26
c. Instruments and Utensils . . . . .	26
B. Iron . . . . .	27
C. Lead . . . . .	27
D. Gold . . . . .	27
VI. Glass and Paste . . . . .	27
A. Glass Objects . . . . .	27
B. Paste Beads . . . . .	27
VII. Bone, Horn, Tusks, Ivory, and Shell . . . . .	28
A. Bone . . . . .	28
B. Horn and Tusks . . . . .	28
C. Ivory . . . . .	28
D. Shell . . . . .	28

PART II

<i>Chapter.</i>		<i>Page.</i>
I.	ORGANIZATION OF THE EXPEDITION IN 1909 AND 1910 . . . . .	31-33
A.	The American Staff . . . . .	31
B.	Representatives of the Imperial Ottoman Museum . . . . .	31
C.	The Staff of Egyptians . . . . .	31
D.	The Local Work-people . . . . .	32
E.	Gang System . . . . .	33
II.	METHODS OF EXCAVATION . . . . .	34-45
A.	Aims of Excavation . . . . .	34
B.	Preliminary Investigations . . . . .	34
C.	Dealing with Debris by the Strip System . . . . .	35
D.	The Different Kinds of Debris . . . . .	36
1.	Geological Debris . . . . .	37
2.	Mason's Debris . . . . .	37
3.	Debris of Occupation . . . . .	37
4.	Debris of Decay . . . . .	37
5.	Dumped Debris . . . . .	38
6.	Silt . . . . .	40
E.	Operations which have modified the Deposits of Debris . . . . .	40
1.	Building Operations . . . . .	40
	Theft of Stone . . . . .	40
	Leveling . . . . .	40
	Foundation Trenches . . . . .	40
	Subterranean Structures . . . . .	41
2.	Plundering for Treasure . . . . .	42
3.	Agricultural Operations . . . . .	42
F.	Management of Workmen . . . . .	42
G.	Methods of Recording . . . . .	43
1.	Diary . . . . .	43
2.	Maps and Plans . . . . .	44
3.	Register of Objects . . . . .	44
4.	Photographic Record . . . . .	45
III.	IDENTIFICATION OF THE REMAINS OF THE SEVERAL PERIODS . . . . .	46-68
A.	The Problem . . . . .	46
B.	Roman Buildings . . . . .	46
	Roman Colonial. Herodian.	
C.	Latest Preherodian Buildings . . . . .	50
D.	Seleucidan and other Greek Remains . . . . .	54
E.	Early Post-Israelite Remains . . . . .	58
F.	Israelite Buildings . . . . .	60
G.	The Rock Skeleton . . . . .	65
H.	Rock Cuttings and Caves . . . . .	66
IV.	DESCRIPTION OF THE DEPOSITS OF DEBRIS IN THE VARIOUS WORKING SECTIONS	
	AT THE SUMMIT . . . . .	69-90
1.	Summit Strip 1 . . . . .	69
2.	" " 2 . . . . .	71
3.	" " 3 . . . . .	73
4.	" " 4 . . . . .	75
5.	" " 5 . . . . .	76
6.	" " 6 . . . . .	77
7.	" " 7 . . . . .	78
8.	" " 8 . . . . .	81
9.	" " 9 . . . . .	83
10.	" " 10 . . . . .	84

*Chapter.**Page.*

11. Summit Strip 11 . . . . .	85
12. Lower Terrace . . . . .	86
13. Subterranean Corridor . . . . .	88
14. Summary . . . . .	89

## PART III.

I. ISRAELITE PERIOD . . . . .	93-122
1. The Summit . . . . .	93
a. Palace of Omri . . . . .	93
Plan . . . . .	94
Materials . . . . .	96
Quarries . . . . .	96
Construction . . . . .	97
b. Palace of Ahab . . . . .	98
Plan . . . . .	98
Materials . . . . .	102
Construction . . . . .	102
Methods . . . . .	105
The Pool . . . . .	112
Drainage . . . . .	113
c. Ostraca House . . . . .	114
Construction . . . . .	116
d. Palace of Jeroboam II. (?) . . . . .	117
e. Masons' Marks . . . . .	119
2. Outer Walls of the Israelite City . . . . .	120
a. West Gate . . . . .	120
b. South Wall . . . . .	121
II. EARLY POST-ISRAELITE PERIOD . . . . .	123-133
a. The Fortress . . . . .	123
Plan . . . . .	123
Materials . . . . .	126
Construction . . . . .	126
b. Osorkon House . . . . .	131
c. West Gate . . . . .	132
III. PREHERODIAN TOWN, WITH UNDERLYING FRAGMENTS OF HELLENISTIC WALLS . . . . .	134-166
1. Summit Quarter of Preherodian Town . . . . .	134
a. Insula I . . . . .	135
House D . . . . .	135
" B . . . . .	137
" A . . . . .	137
" C . . . . .	137
b. Insula II . . . . .	138
c. " III . . . . .	138
House B . . . . .	139
" D . . . . .	139
d. Insula IV . . . . .	140
House A . . . . .	140
Plan . . . . .	140
Construction . . . . .	145
Drainage . . . . .	146
House B . . . . .	147
" C . . . . .	148
" D . . . . .	148

# DETAILED CONTENTS

xiii

*Chapter.*

*Page.*

	Shops . . . . .	149
	e. Insula V . . . . .	150
	f. " VI . . . . .	152
2.	Lower Terrace Quarter . . . . .	153
	a. Insula VII . . . . .	153
	b. " VIII . . . . .	155
	House A . . . . .	155
	" B . . . . .	156
	" C . . . . .	156
	Other Houses . . . . .	158
3.	Details . . . . .	160
	Group I. Doric Capitals, simple and crude . . . . .	161
	" II. Doric Entablature Fragments . . . . .	162
	" III. Capitals and Bases of Antæ . . . . .	162
	" IV. Capitals of Piers . . . . .	162
	" V. Ionic Capitals and Bases . . . . .	163
	" VI. Cornices, lower Members with Dentils . . . . .	163
	" VII. Miscellaneous Details . . . . .	164
4.	West Gate . . . . .	164
5.	Walls on the eastern Slope . . . . .	165
IV.	ROMAN PERIOD . . . . .	167-223
1.	The Summit . . . . .	167
	General Description . . . . .	167
	Retaining Wall . . . . .	169
a.	Temple of Herod . . . . .	170
	Forecourt . . . . .	170
	Corridor . . . . .	171
	Temple Vault . . . . .	173
	Staircase . . . . .	174
	Altar . . . . .	174
	Stelæ . . . . .	175
	Statue . . . . .	176
	The Temple . . . . .	177
	Construction . . . . .	177
	Roof . . . . .	180
b.	Apsidal Building . . . . .	180
c.	Atrium House . . . . .	180
	Plan . . . . .	181
	Drainage . . . . .	184
	Construction . . . . .	184
d.	Temple of Severus . . . . .	185
	Other late Buildings (Bath-house, Calidarium, etc.) . . . . .	187
	Tunnel . . . . .	189
2.	Details . . . . .	190
	a. Description of Fragments . . . . .	191
	Group I. Bases of regular Attic Type . . . . .	191
	" II. Shafts . . . . .	192
	" III. Ionic Capitals . . . . .	192
	" IV. Corinthian Capitals . . . . .	193
	" V. Friezes . . . . .	193
	" VI. Cornices . . . . .	193
	" VII. Miscellaneous Capitals and Bases . . . . .	195
	" VIII. Ceilings . . . . .	196
	" IX. Miscellaneous carved Fragments, not architectural . . . . .	196
	b. Masons' Marks . . . . .	198



<i>Chapter.</i>	<i>Page.</i>
3. West Gate . . . . .	198
Plan . . . . .	199
Construction . . . . .	199
Corner Tower . . . . .	199
City Wall . . . . .	200
North Gate-tower . . . . .	201
South Gate-tower . . . . .	202
Tower Rooms . . . . .	203
Screen Wall . . . . .	204
Houses near Gateway . . . . .	205
Details . . . . .	206
4. Street of Columns . . . . .	208
Niches . . . . .	209
5. Civic Centre . . . . .	211
a. Forum . . . . .	211
b. Basilica . . . . .	213
Tribunal . . . . .	214
Columns . . . . .	215
Cornices . . . . .	217
Roofing . . . . .	218
Restoration . . . . .	218
6. Miscellaneous Buildings . . . . .	219
a. Hippodrome . . . . .	219
b. Minor Excavations . . . . .	219
c. Mausoleum . . . . .	220

## PART IV.

I. INSCRIPTIONS . . . . .	227-251
A. Israelite Inscriptions . . . . .	227-246
I. General Account of Ostraca . . . . .	227
a. Date and Forms . . . . .	227
b. Place Names . . . . .	228
c. Personal Names . . . . .	230
d. Significance of Ostraca . . . . .	231
II. Detailed Account with Transcription into Hebrew square Characters . . . . .	232
III. Ostraca in Facsimile . . . . .	239
Alphabet of Ostraca, two incised Inscriptions, and Osorkon Vase . . . . .	243
IV. Register of Words in Ostraca . . . . .	244
V. Index of Israelite Inscriptions . . . . .	246
B. Cuneiform Inscriptions . . . . .	247
C. Hieroglyphic Inscriptions . . . . .	247
D. Aramaic Inscriptions . . . . .	247
E. Greek Inscriptions . . . . .	249
I. Written on Pottery . . . . .	249
II. Scratched on Pottery . . . . .	249
III. On Stone and Lead . . . . .	250
F. Latin Inscriptions . . . . .	251
II. COINS . . . . .	252-273
A. Greek Coins . . . . .	254
I. Earlier Coins . . . . .	254
II. Ptolemaic Coins . . . . .	254
III. Seleucidan Coins . . . . .	258
IV. Autonomous City Coins . . . . .	263
V. Maccabæan and other Jewish Coins . . . . .	266
Index to the Catalogue of Greek Coins . . . . .	268

<i>Chapter.</i>	<i>Page.</i>
B. Roman Coins . . . . .	270
C. Byzantine Coins . . . . .	272
D. Arabic Coins . . . . .	273
III. POTTERY . . . . .	274-309
A. Israelite Pottery . . . . .	276
I. Ordinary Pottery . . . . .	276
II. Finer Pottery . . . . .	279
III. Early decorated Pottery, mostly Greek . . . . .	281
IV. Basilica Group . . . . .	283
B. Babylonio-Grecian Period, 700-300 B.C. . . . .	284
I. Ordinary Pottery . . . . .	285
II. Finer Pottery . . . . .	286
III. Decorated Wares, including black-figured, red-figured, and white-ground . . . . .	286
IV. Group from S1 Cistern 7 . . . . .	290
V. Black-glazed Pottery . . . . .	292
a. Red paste, lustrous black glaze . . . . .	293
β. Gray paste, black glaze, dull or lustrous . . . . .	294
γ. Decorated black-glazed . . . . .	294
δ. Poor black-glazed, varying to brown or red (in part Hellenistic) . . . . .	297
C. Hellenistic Pottery, 300-50 B.C. . . . .	299
I. Ordinary Pottery . . . . .	299
II. Red-glazed Pottery . . . . .	304
III. Decorated Pottery (molded) . . . . .	306
a. Lamps . . . . .	306
β. Cups . . . . .	306
γ. Megarian Bowls . . . . .	307
D. Roman Pottery . . . . .	309
IV. POTTER'S MARKS ON LARGE JARS, INCLUDING RHODIAN STAMPS . . . . .	310-316
A. Early Jar Marks . . . . .	310
B. Rhodian Stamps . . . . .	310
I. Maker's name in genitive, usually with symbols . . . . .	311
II. Maker's name in genitive, followed by month name in genitive . . . . .	312
III. Personal name preceded by month name (both in genitive) . . . . .	313
IV. Name of eponym in genitive, preceded by preposition, usually with symbol . . . . .	313
V. Name of eponym in genitive, preceded by preposition and followed by month name in genitive . . . . .	314
VI. Monogram Stamps . . . . .	315
C. Stamps on twin handles . . . . .	316
D. Stamps on flat handles . . . . .	316
E. Stamps on coarse round handles; Greek and Latin Inscriptions . . . . .	316
F. Arretine Stamps . . . . .	316
V. LAMPS . . . . .	317-325
A. Saucer Lamps, turned . . . . .	317
B. Greek Lamps, turned . . . . .	318
I. Black-glazed red paste, lustrous . . . . .	318
II. Wet-smoothed red paste, some with red wash . . . . .	318
III. Similar to I and II with curved spout . . . . .	319
IV. Barbed spout . . . . .	319
V. Same as II with spatulated spout . . . . .	319
C. Hellenistic Lamps, molded . . . . .	319
I. Black-glazed gray paste . . . . .	319
II. Red paste, red wash . . . . .	320

<i>Chapter.</i>	<i>Page.</i>
III. Spear-shaped nozzle, gray paste, lustrous black glaze . . . . .	321
IV. With ornamented sunk top . . . . .	321
D. Red-glazed Lamps, molded, Hellenistic and Roman . . . . .	322
I. With spatulated spout, sunk top . . . . .	322
II. Same, with ring-handle . . . . .	322
III. Same as I, with full top . . . . .	322
IV. Lotus on neck . . . . .	322
E. Roman Lamps, molded . . . . .	322
I. Flat circular lamps with sunk top . . . . .	322
F. Late Roman and Byzantine Lamps . . . . .	323
I. Short oval spout, pink ware, red wash . . . . .	323
II. Oval form, gray ware, red wash . . . . .	323
III. Short spatulated spout, knob handle, hard red-gray ware . . . . .	324
IV. Similar, with round body . . . . .	324
V. Same as IV, with channel from mouth to wick-hole . . . . .	324
VI. Similar to VII and IV, with short projecting handle behind . . . . .	324
VII. Elongated ovoid form, projecting handle, channel on spout . . . . .	325
VIII. Molded lamps, elongated, ovoid form . . . . .	325
IX. Like VII, but with channel on spout indicated by lines only . . . . .	325
X. Ovoid form, with linear relief pattern . . . . .	325
VI. FAIENCE . . . . .	326-328
VII. GLASS . . . . .	329-332
A. Vessels . . . . .	329
I. Variegated glass . . . . .	329
II. Molded translucent glass . . . . .	329
III. Blown glass . . . . .	331
B. Other Glass Objects . . . . .	331
VIII. STONE VESSELS AND IMPLEMENTS, WHORLS, WEIGHTS, RAW MATERIALS, AND SHELLS . . . . .	333-345
A. Altars . . . . .	333
B. Vessels . . . . .	333
I. Alabaster . . . . .	333
II. Hard Stone . . . . .	335
III. Limestone . . . . .	335
IV. Serpentine . . . . .	337
V. Basalt . . . . .	337
C. Molds for Casting Metals . . . . .	338
D. Flint and Stone Implements . . . . .	338
I. Flint . . . . .	338
II. Other Stone Implements . . . . .	339
III. Rubbing Stones, Pounders, and Sharpening Stones . . . . .	340
E. Whorls or Buttons . . . . .	341
F. Weaver's Weights . . . . .	343
G. Ball Weights . . . . .	343
H. Weights for Scales . . . . .	344
I. Raw Materials . . . . .	344
J. Natural Shells . . . . .	345
IX. METALS . . . . .	346-367
A. Iron . . . . .	346
I. Arrow-heads . . . . .	346
II. Spear-heads . . . . .	348
III. Knives . . . . .	349
IV. Sword Blades . . . . .	349
V. Nails . . . . .	349

# DETAILED CONTENTS

xvii

Chapter.

Page.

	VI. Tools . . . . .	350
	VII. Rings . . . . .	351
	VIII. Miscellaneous . . . . .	351
B.	Bronze . . . . .	352
	I. Arrow-heads . . . . .	352
	II. Nails . . . . .	353
	III. Implements . . . . .	354
	IV. Pins and Needles . . . . .	355
	V. Brooches . . . . .	356
	VI. Buckles (Bronze and Iron) . . . . .	357
	VII. Rings and Bracelets . . . . .	357
	VIII. Styli, Spoons, and Kohl-sticks . . . . .	358
	IX. Bosses . . . . .	360
	X. Trappings for Leather, Cloth, and Wood . . . . .	361
	XI. Chains . . . . .	362
	XII. Bells . . . . .	362
	XIII. Weights . . . . .	362
	XIV. Vessels and Handles . . . . .	363
	XV. Miscellaneous . . . . .	366
C.	Gold . . . . .	366
D.	Silver . . . . .	366
E.	Lead . . . . .	367
X.	BONE AND IVORY . . . . .	368-375
	A. Early Ivory Objects . . . . .	368
	B. Dressed Bones . . . . .	368
	C. Bone Spoons . . . . .	368
	D. Decorated Shell Spoons . . . . .	370
	E. Box-lids . . . . .	370
	F. Kohl-pots and Toilet-boxes . . . . .	370
	G. Bone Handles . . . . .	370
	H. Bone Styli or Spatulæ . . . . .	372
	I. Bone Points, Kohl-sticks, and Needles . . . . .	372
	J. Discs, Buttons, Whorls, Beads . . . . .	374
XI.	AMULETS, SEALS, AND BEADS . . . . .	376-382
	A. Amulets and Scarabs . . . . .	376
	I. Egyptian faience Amulets . . . . .	376
	II. Egyptian and other Scarabs . . . . .	376
	B. Seals . . . . .	377
	I. Cylinder Seals . . . . .	377
	II. Cone Seals . . . . .	377
	III. Finger Rings and Ring-seals . . . . .	377
	IV. Seal Impressions on Letter-sealings . . . . .	378
	V. Seal Impressions on Pottery . . . . .	379
	C. Pendants and Beads . . . . .	379
	I. Pendants . . . . .	379
	II. Variegated Glass Beads . . . . .	380
	III. Plain Glass Beads . . . . .	380
	IV. Faience Beads . . . . .	381
	V. Stone Beads . . . . .	381
	VI. Bone Beads . . . . .	382
	VII. Coral Beads . . . . .	382
XII.	SCULPTURE, FIGURINES, AND MISCELLANEOUS OBJECTS OF POTTERY . . . . .	383-387
	A. Sculpture . . . . .	383
	I. Early Period . . . . .	383
	II. Hellenistic . . . . .	383

<i>Chapter.</i>		<i>Page.</i>
B.	Figurines . . . . .	384
	I. Israelite and other crude Figurines . . . . .	384
	II. Greek Figurines . . . . .	385
C.	Parts of Vessels . . . . .	386
	I. Unglazed Wares . . . . .	386
	II. Black-glazed Wares . . . . .	387
	III. Red-glazed Wares . . . . .	387
D.	Pottery Discs with Reliefs . . . . .	387

# LIST OF FIGURES

## PART I (1908)

### PAGE 13, POTTERY

No.		Page.	No.		Page.
1-5, Bottles . . . . .	III A 1-5 <sup>1</sup>	22	20. Handle in form of animal head . . .	III F 6	23
6-9, Jars			21. Fragment of complex handle . . .	III F 7	23
6. Neck with stamp . . .	III G 1	23	22-32, Fragments		
7. Jar, well preserved	III E 1	23	22. Glazed fragment, Egyptian . . .	III K 1	25
8. Neck of jar, Israelite . . . . .	III G 2	23	23. Mycenæan fragment . . . . .	III K 2	25
9. Arabic jar, whole . . .	III E 2	23	24. Fragment of Israelite jar . . . . .	III G 10	24
10-21, Handles and handle stamps			25. Late Israelite dish	III C 18	23
10. Fragment of ribbed handle . . . . .	III F 1	23	26. Terra cotta stamp, raised figures . . .	III K 8	25
11. Stamp or potter's mark . . . . .	I B d 10	19	27. Bottom of vessel with stamp . . .	III H 9	24
12. Soldier's figure on stamp . . . . .	I B d 9	19	28. Bottom of vessel with rosette . . .	III C 3	22
13. Jar handle, nearly circular . . . . .	III F 2	23	29. Dish fragment with stamp . . . . .	III C 15	22
14. Handle with head in relief . . . . .	III F 10	23	30. Plate with Greek inscription . . .	III H 6	24
15. Handle twisted like rope . . . . .	III F 4	23	31. Pot or bowl with graffiti . . . . .	III H 13	24
16. See under Stone . . .	IV 4	25	32. Amphora neck with Greek graffiti . . .	III G 3	23
17. Handle with grooves . . . . .	III F 11	23			
18. Ear-shaped handle	III F 5	23			
19. Pot handle, decorated . . . . .	III F 12	23			

### PAGE 14, POTTERY (*continued*)

1. White fragment, Greek letters in brown . . . . .	III G 12	24	9. Arabic fragment, brown stripes . . .	III C 2	22
2. Jar fragment with part of Greek name . . . . .	III G 11	24	10. Painted fragment with punctures . . .	III H 10	24
3. Amphora neck, with name [Hip]-pocrates . . . . .	III G 4	23	11. Bowl. Egg and dart ornaments . . .	III I 1	24
4. Greek or Mycenæan fragment . . . . .	III K 3	25	12. Bowl with dancing figures . . . . .	III I 2	24
5. Decorated fragment . . . . .	III G 8	23	13. Bowl. Egg and dart ornaments . . .	III I 14	24
6. Bird painted in sepia and sienna	III G 7	23	14. Vessel with perpendicular ribs . . .	III I 7	24
7. See under Stone . . .	IV 7	25	15. Dish with incised perpendicular lines . . . . .	III C 11	22
8. Base for statuette	III K 7	25	16. Pot with incised ornamentation. Byzantine? . . .	III H 12	24

<sup>1</sup>The references are to divisions and subdivisions of chapter III. The right hand column shows the page, and the reference preceding indicates the part of the page on which may be found the description of the respective objects. Thus, III A 1-5 22 means that on p. 22, in division III (Pottery), subdivision A (Bottles), Nos. 1-5, are given descriptions of the bottles figured on page 13. This somewhat complicated method was adopted (see Editorial Note), to avoid confusion with references in Parts II-IV, where the figures are numbered consecutively. In the division of chapter III, note that I=Inscriptions, p. 17-21; II=Coins, p. 21 f.; III=Pottery, p. 22-25; IV=Stone, p. 25-26; V=Metals, p. 26-27; VI=Glass and Paste, p. 27; VII=Bone, Horn, etc., p. 28. None of the Coins (II) are reproduced among the figures.

No.		Page.	No.		Page.
17.	Fragment of fine Greek bowl . . . III I 10	24	26.	Greek vessel painted in sepia . . . III I 11	24
18.	Decorated bottom of dish or plate . . . III C 13	22	27.	Dish fragment with painted rosette . . . III C 12	22
19.	Fragment of bowl, raised ornaments . . . III I 13	24	28.	Two painted heads. Egyptian? . . . III I 16	24
20.	Fragment with leaf ornamentation . . . III B 4	22	29.	Greek cantharus . . . III I 15	24
21.	Vessel with acanthus leaf and rosette . . . III I 5	24	30.	Bottom of dish with Greek letters . . . III C 4	22
22.	Vessel richly ornamented . . . III I 12	24	31.	Greek dish, striated pattern . . . III C 5	22
23.	Bowl with columns and architrave . . . III I 3	24	32.	Bottom of Greek vessel with stamps . . . III C 14	22
24.	From same bowl as 23 . . . III I 4	24	33.	Dish, ribbed horizontally . . . III C 6	22
25.	Arabic bowl, painted stripes and lines . . . III I 9	24	34.	Ivy designs painted white . . . III C 16	22

## PAGE 15, POTTERY (1-18); GLASS (19-22); STONE (23-39)

1.	Plate. Concentric circles. Crabs? . . . III H 4	24	22.	Glass ear-ring . . . VI A 15	27
2.	Plate with stamp . . . III H 5	24	23-39.	Stone	
3.	Truncated pyramid. Weaver's weight . . . III J 1	25	23.	Brazier? . . . IV 3	25
4.	Weaver's weight similar to 3 . . . III J 3	25	24.	Support for jar . . . IV 5	25
5.	Weaver's weight, circular . . . III J 4	25	25.	A similar support . . . IV 6	25
6.	Crude head of horse . . . III D 3	23	26.	Mortar or jar . . . IV 9	25
7.	Head and neck of horse . . . III D 4	23	27.	Jar for ointment . . . IV 11	25
8.	Woman's head, from a statuette . . . III D 1	23	28.	Marble mortar with pestle . . . IV 10	25
9.	Body of quadruped . . . III D 6	23	29.	Pestle . . . IV 12	25
10.	Figure of seated woman holding vase . . . III D 2	23	30.	Man's head, two views . . . IV 17	26
11-18.	Potters' marks . . . I B d (1-8)	19	31.	Head of Jupiter . . . IV 18	26
19-22.	Glass		32.	Fragment of marble leg . . . IV 19	26
19.	Glass fragment with ribs . . . VI A 17	27	33.	Cylindrical red stone . . . IV 27	26
20.	Glass fragment with ribs, decorated . . . VI A 18	27	34.	Stone object in form of sun-dial . . . IV 20	26
21.	Glass amulet in shape of human bust . . . VI A 1	27	35.	Mold for casting molten metal . . . IV 8	25
			36.	Weight in shape of olive . . . IV 23	26
			37.	Stone whorl . . . IV 29	26
			38.	Broken amulet, cylindrical . . . IV 28	26
			39.	Cut stone of uncertain use . . . IV 32	26

## PAGE 16, METALS (1-17); BONE AND IVORY (18-21); INSCRIPTIONS (22-50)

## BRONZE 1-15, LEAD 16-17

1.	Bronze bracelet . . . V A b 1	26	7.	Bronze spoon . . . V A c 14	26
2.	Bronze bracelet . . . V A b 2	26	8.	Bronze bell . . . V A c 1	26
3.	Pigment stick of bronze . . . V A c 9	26	9.	Small bronze dish . . . V A c 12	26
4.	Part of buckle or brooch . . . V A c 5	26	10.	Seal stamp of bronze . . . V A c 13	26
5.	Fragment of brooch . . . V A c 6	26	11.	Small bronze dish with handles . . . V A c 3	26
6.	Bronze arrow tip . . . V A a 4	26			

# LIST OF FIGURES

xxi

No.		Page.	No.		Page.
12.	Disc with teeth like circular saw . . . V A c 11	26	15.	Bronze tablet, probably weight V A c 17	26
13.	Two small bronze objects, hat-shaped . . . . . V A c 18	26	16.	Leaden weight, irregular shape . . V C 3	27
14.	Small bronze dish or shield . . . . V A c 4	26	17.	Leaden weight with pointed ends . . . V C 4	27
BONE AND IVORY 18-21					
18.	Cylindrical sheep's (?) bone, ends cut off . . . . . VII A 1	28	20.	Ivory button . . . VII C 2	28
19.	Handle of bone, incised decoration VII A 4	28	21.	Ivory amulet, Israelite or Phœnician . . . . . VII C 1	28
INSCRIPTIONS 22-50					
22-50.	Fragments of Latin Inscriptions . . .	19-20	36.	Part of one letter I C 15	20
22.	ONIS II C I . . . I C 1	19	37.	Parts of four letters . . . . . I C 16	20
23.	III . . . . . I C 2	19	38.	Right leg of A? . . I C 17	20
24.	VST (T of larger size) . . . . . I C 3	20	39.	Parts of four? letters . . . . . I C 18	20
25.	Parts of four letters . . . . . I C 4	20	40.	Parts of two letters . . . . . I C 19	20
26.	TRIB . . . . . I C 5	20	41.	Parts of two letters . . . . . I C 20	20
27.	VE . . . . . I C 6	20	42.	XII or IIX . . . . I C 21	20
28.	IC . . . . . I C 7	20	43.	CA . . . . . I C 22	20
29.	PASI . . . . . I C 8	20	44.	AN . . . . . I C 23	20
30.	Part of one letter I C 9	20	45.	V or A . . . . . I C 24	20
31.	V . . . . . I C 10	20	46.	A or V . . . . . I C 25	20
32.	AX . . . . . I C 11	20	47.	M, P, half of C . . I C 26	20
33.	Parts of three letters . . . . . I C 12	20	48.	Parts of three letters . . . . . I C 27	20
34.	Parts of two letters . . . . . I C 13	20	49.	Part of one letter I C 28	20
35.	Part of one letter I C 14	20	50.	Part of one letter I C 29	20

## PARTS II-IV (1909-1910)

Fig.	Title.	Page.	Fig.	Title.	Page.
1	Quarries . . . . .	37	10	E-W section of debris, showing floors in L. T. 3, looking north.	56
2	Longitudinal section of dumped debris . . . . .	38	11	Older SW bastion in S5, built around Israelite tower . . . .	57
3	Cross-section of a flat-edged, broad dump . . . . .	38	12	Reconstructed SW bastion in S5	57
4	Longitudinal section of separated dump . . . . .	39	13	Masonry of different periods in S2 IV 13 . . . . .	58
5	Longitudinal section of confined dump . . . . .	39	14	E-W section through S4 E, showing deposits from Ahab to Severus . . . . .	63
6	Cross-section of confined dump . . . . .	39	15	Plan of Ostraca and Osorkon Houses . . . . .	64
7	Section of debris in cistern S1, No. 7 . . . . .	39	16	Rock-cuts 12 to 14 in JK 12 . . .	66
8	Section construction trench of Greek Fort Wall between S3 and S4, looking west . . . . .	41	17	Rock-cut press, No. 17, in J 8, excavated in 1908 . . . . .	67
9	Construction hole, m, of cistern S2, No. 14. H = Herodian; S = Severan; y = Israelite debris; bk = black debris; e = Preherodian floor . . . .	41	18	Small quarry in H 15 . . . . .	96
			19	Small quarry in HJ 18 . . . . .	96
			20	Rock trenches for Israelite foundations . . . . .	97
				a. On a sloping surface.	
				b. On a level surface.	



<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>	<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>
21	Scratchings on block from Omri foundations . . . . .	97	50	Masonry of second tower inside west bastion . . . . .	124
22	Section through rock-scarp and walls east of Room 13 (G 12)	97		a, b. Walls of bastion.	
23	Omri masonry . . . . .	98		c. Foundation for Roman wall.	
	a. Bonding.		51	Wall of Greek Fort built around Israelite tower . . . . .	125
	b. Simple corner.			First period.	
	c. Complex corner.		52	New SW bastion built over site of Israelite tower . . . . .	125
24	Sketch of NW corner of Room 11, showing door-jamb with mortise for threshold, footings of wall and superstructure. Also walled-up doorway . .	101		Second period.	
25	Section through Ahab enclosing wall 5 m. east of SW corner .	103	53	Construction plan of Greek Fort Wall, on west, showing headers, stretchers, etc. . . . .	126
26	Detail of masonry at SW corner of Ahab wing (CD 15) . . .	103		a. Edge of Jeroboam rock trench.	
27	Masonry in cross walls (E 14) .	105		h. Headers and ties.	
28	Masonry in outer face of south wing (GH 16) . . . . .	106		s. Stretchers.	
29	Detail of bonding. Ahab, south wing . . . . .	107		r. Rubble core.	
30	Masonry at NW corner of Ahab tower (E 15) . . . . .	107	54	Half-section through Greek Fort Wall, in Fig. 53, showing coursing and mud layers (m)	127
31	Masonry in east face of Ahab tower (G 15) . . . . .	108	55	Section through south wall at broken east end, showing the construction trench, a, sunk through older strata, b and c .	128
32	Masonry in west face of main Ahab building, south end . . . .	109	56	Masonry in SE corner of Room 81	129
33	Masonry in west face of main Ahab building, north end . .	109	57	Masonry of long chambers inside west wall . . . . .	130
34	Exterior west wall of Ahab Room 11 . . . . .	110	58	Plan of Osorkon House, with earlier walls . . . . .	131
35	North wall of Ahab Room 11 . .	110	59	Plan of House A, Insula IV, restored . . . . .	141
36	Isometric diagram of north jamb of door to Room 11 . . . .	110	60	Section through sill of main entrance . . . . .	142
37	South face of Ahab Room 12 . .	111	61	Detail plan of Court 31 and entrances to porticos 26 and 30	142
38	Ahab Room 13. Plan . . . . .	111	62	Elevation of portico 26 . . . . .	143
39	Room 13. Section A-B . . . .	111	63	Elevation of south anta of portico 30 . . . . .	143
40	Plan of pool (in north wing of Ahab palace) . . . . .	112	64	Details of moldings in Houses A and B . . . . .	144
41	Sections A-B and C-D through pool . . . . .	113		a. Base of column in portico A 31.	
42	Plan of Ostraca House, with later reconstructions . . . . .	114		b. Base of anta in portico A 31.	
43	Section A-B through Ostraca House, and superimposed strata . . . . .	115		c. Base of west anta in portico B 40.	
44	Plan of the tower of Jeroboam II .	118		d. Base of east anta in portico B 40.	
45	Masonry, south wall of Jeroboam Room 322 (G 11) . . . . .	118		e. Base of anta found in upper debris.	
46	Fragment of Jeroboam wall, N of west bastion in B 8 . . . .	119	65	Section through portico 26 . . . .	144
47	Israelite masons' marks . . . .	119	66	Smaller entrance, House A . . . .	145
48	Section and elevation of south city wall . . . . .	121	67	Section through Cistern 14, in Room 45 . . . . .	146
49	Greek Fort Wall, a, at NW corner, showing repaired breach, b, and wall cut through by construction trench, c, for Roman tower, d . . . . .	124	68	Stone mills, from debris over House A . . . . .	149
			69	Section through west end of Street Lambda . . . . .	154
			70	Plan of House C, Insula VIII (restored) . . . . .	156
			71	Curb of cistern in Room 62 . . . .	157
			72	Section through Room 53, with street wall . . . . .	157

## LIST OF FIGURES

xxiii

<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>	<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>
73	Elevation of steps in court 61 . . .	158	106	Flue from calidarium . . . . .	188
74	Section through strata in lower terrace, showing rubble pavement, cemented room and subsequent levels (F-H 18) . . .	159	107	Detail of door to Room 501 . . .	188
75	Doric capitals of Preherodian period . . . . .	161	108	N-S section through L. T. E., showing tunnel to cave . . .	189
76	Doric capitals and details, Preherodian period . . . . .	161	109	Detail of entrance to tunnel . . .	189
77	Capitals and bases of antæ, and capitals of piers, Preherodian period . . . . .	162	110	Sockets in rubble wall . . . . .	190
78	Ionic capitals and bases, Preherodian period . . . . .	163	111	The order of the Temple . . . . .	191
79	Cornices . . . . .	163	112	Contour of Attic base . . . . .	191
80	Miscellaneous details of Preherodian (?) period . . . . .	164	113	Sections through volutes of Ionic capitals . . . . .	192
81	Transverse section through strata west of court S11. . . . .	168	114	Group IV. Corinthian capitals . .	193
82	Masonry at NE corner of west Roman tower . . . . .	169	115	Group V. Friezes . . . . .	193
83	Cross-section through subterranean corridor . . . . .	170	116	Group VI. Cornices . . . . .	194
84	Elevation of east wall of subterranean corridor . . . . .	171	117	Group VI. Contours of cornices .	195
85	Elevation of west wall of subterranean corridor . . . . .	171	118	Group VII. Miscellaneous details	195
86	Plan of Temple vault (EF 8) . . .	172	119	Group VIII. Ceilings . . . . .	196
87	Section A-B through Temple vault	173	120	Ornamental pilaster of fine marble	196
88	Elevation of north wall of Temple vault, showing three lowest courses of Herodian masonry	173	121	Inscribed pedestal . . . . .	197
89	Altar: north elevation and transverse section . . . . .	174	122	Altar with bracket . . . . .	197
90	Votive altar No. 2 . . . . .	175	123	Altar with reliefs . . . . .	198
91	Votive altar No. 5, found in debris above staircase near great Altar, in 1908 . . . . .	176	124	Detail of masonry in the outer tower . . . . .	200
92	Characteristic foundation masonry of Herodian period . . . . .	178	125	Plan of central feature of Gateway	203
93	Corner of Herodian foundations (sketch) . . . . .	178	126	Pilaster at Gateway . . . . .	205
94	Characteristic masonry in Herodian superstructures . . . . .	179		1. Base and plinth. . . . .	
95	Details of staircase . . . . .	179		2. Contour of base molding. . . .	
96	Ridge tiles from Temple . . . . .	180	127	Cornices from Gateway . . . . .	206
97	Plan of Atrium House . . . . .	181	128	Contours of cornices from Gateway	206
98	Detail of mosaic in Room 366 . . .	182	129	Fragment of Corinthian capital from Gateway . . . . .	207
99	Section A-B through Atrium House . . . . .	183	130	Bases of antæ from Gateway . . .	207
100	Elevation of door to bath-room 369	184	131	Contours of bases 6-7. . . . .	207
101	Detail of pier in peristyle court . .	184	132	Fragments of door-jambs . . . . .	207
102	Stucco fragments from debris . . .	185	133	Plan of part of Colonnade, south side of Roadway . . . . .	208
103	Characteristic masonry of the Temple of Severus (part of west wall of staircase) . . . .	186	134	Section through Fig. 133 . . . . .	208
104	Section through east window of Temple vault . . . . .	186	135	Plan of Roadway Trench . . . . .	209
105	N-S section through calidarium of bath 50 on lower terrace . . .	187	136	Section of Roadway Trench . . . .	210
			137	Masonry in outer face of north retaining wall of Forum terrace	213
			138	Moldings from tribunal and from debris near it . . . . .	214
			139	One intercolumniation of west aisle of Basilica . . . . .	215
			140	Contours of pedestals and column bases, showing variations . . .	215
			141	Contours of column base, e, and of pedestal moldings, f, g . . . .	216
			142	The order of the Basilica . . . . .	216
			143	Detail of capital . . . . .	216
			144	Contours of cornices . . . . .	217
			145	Miscellaneous fragments from debris. . . . .	217
			146	Roofing tiles . . . . .	218
				a-b. Herodian period. . . . .	
				c-d. Later Roman period. . . . .	
			147	Sections showing arches and roofing of cellars . . . . .	219

<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>	<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>
148	Plan of mausoleum . . . . .	220	181	Small Hellenistic vessels, types 17-19 . . . . .	302
149	Contours of moldings . . . . .	221	182	Hellenistic two-handled bottles, type 20 . . . . .	302
	a. Interior arches.		183	Hellenistic jugs, types 21-30 . . .	303
	b. Architrave of door.		184	Hellenistic pottery, types 31-33 . .	303
	c. Base of pilaster.		185	Late Hellenistic vessels of fine red-glazed paste . . . . .	305
	d. Base of column.		186	Hellenistic decorated cups . . . .	307
150	Front (west) elevation of mausoleum . . . . .	221	187	Saucer lamps . . . . .	318
151	Longitudinal section (A-B) and transverse section (C-D) through mausoleum . . . . .	222	188	Greek lamps, types I and II, 1 . .	318
152	Diagram of dome . . . . .	222	189	Greek lamps, types II, 1-5 . . . .	319
153	Israelite pottery, ordinary ware . .	276	190	Greek lamps, types III and V . . .	319
154	Israelite pottery, bowls, ordinary ware . . . . .	278	191	Hellenistic lamps, types I, 1-5 b . .	320
155	Israelite pottery, burnished ware . .	279	192	Hellenistic lamps, types I, 5 c-9 . .	320
156	Israelite pottery, bowls, burnished ware . . . . .	280	193	Hellenistic lamps, types I, 10-12 . .	320
157	Early decorated pottery, mostly Greek . . . . .	282	194	Hellenistic lamps, types II, 1-2 . .	321
158	Early decorated pottery, mostly Greek . . . . .	283	195	Hellenistic lamps, types II, 3-6 . .	321
159	Israelite pottery with incised decoration . . . . .	284	196	Lamps, types C III, 1, and D I to D IV . . . . .	322
160	Pottery from the early deposits and from Cistern 3 at the Basilica . . . . .	285	197	Roman lamps, types I, 1-3 . . . .	323
161	Pottery from the early deposits and from Cistern 3 at the Basilica . . . . .	286	198	Roman lamps, types I, 4-6 . . . .	323
162	Babylonio-Grecian pottery, ordinary ware . . . . .	287	199	Late Roman and Byzantine lamps, types II-V and VII . . . . .	324
163	Babylonio-Grecian pottery, fine ware and decorated ware . . . . .	288	200	Late Roman and Byzantine lamps, types VI, 1 f, VIII, 1 a, X, 1 and 3 . . . . .	324
164	Greek white-ground lekythi . . . .	289	201	Late Roman and Byzantine lamps, types X, 4-10 . . . . .	325
165	Water jars from S1, Cistern 7 . . . .	289	202	Blue or green faience . . . . .	327
166	Amphora from S1, Cistern 7 . . . .	290	203	Glass vessels of all types . . . . .	330
167	Pitchers and jugs from S1, Cistern 7 . . . . .	291	204	Alabaster jars, types 1-5 . . . . .	333
168	Cooking pots from S1, Cistern 7 . . . .	291	205	Alabaster jar, type 6 (Osorkon jar) . . . . .	334
169	Bowls from S1, Cistern 7 . . . . .	292	206	Alabaster dishes, types 7-9 . . . .	334
170	Bases of jugs from S1, Cistern 7 . . . .	293	207	Hard stone vessels, types 1-7 . . .	335
171	Lamps, etc., from S1, Cistern 7 . . . .	293	208	Limestone vessels, types 1-4 . . . .	336
172	Black-glazed vessels; red paste (Nos. 1-6), or gray paste (Nos. 7-9) . . . . .	293	209	Limestone vessels, types 5-8 . . . .	336
173	Decorated black-glazed and other pottery . . . . .	295	210	Serpentine vessel, type IV, 1 a, and basalt vessel, type V, 1 a . . . .	337
174	Dishes of red paste: black-glazed (1-7), poor black-glazed (8-16 and 44), red or brown glazed (29-43, 45-50), red wash (51-56), and interior decoration (17-28) . . . . .	296	211	Basalt vessels, types 2 and 3 . . . .	337
175	Hellenistic water jars . . . . .	298	212	Basalt window, type 4 . . . . .	338
176	Hellenistic cooking pots . . . . .	299	213	Flints . . . . .	339
177	Hellenistic pitchers . . . . .	300	214	Stone implements . . . . .	339
178	Hellenistic bottles . . . . .	301	215	Rubbing stones, pounders, and sharpening stones . . . . .	340
179	Hellenistic bottles, type 15 . . . .	302	216	Whorls or buttons . . . . .	342
180	Hellenistic bottles, type 16 . . . .	302	217	Stone weights . . . . .	344
			218	Iron arrow-heads and spear-heads . .	347
			219	Iron knives, types III, 1-2, and sword blades, types IV, 1-2 . . . .	348
			220	Iron nails . . . . .	349
			221	Iron tools . . . . .	350
			222	Miscellaneous objects of iron . . .	351
			223	Bronze arrow-heads . . . . .	352
			224	Bronze nails . . . . .	353
			225	Bronze implements . . . . .	354

## LIST OF FIGURES

xxv

<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>	<i>Fig.</i>	<i>Title.</i>	<i>Page.</i>
226	Bronze scabbard . . . . .	355	237	Bronze vessels and handles . . .	364
227	Bronze pins and needles . . . .	355	238	Bronze vessels and ornamental parts of vessels . . . . .	365
228	Bronze brooches . . . . .	356	239	Miscellaneous objects of bronze .	366
229	Bronze and iron buckles . . . .	357	240	Bone objects, types C 1 to G 8 .	369
230	Bronze rings and bracelets . . .	358	241	Bone objects, types G 9 to I 17 .	371
231	Bronze styli, cosmetic spoons and sticks . . . . .	359	242	Bone objects, types J 1 to J 13 .	374
232	Bronze bosses . . . . .	360	243	Pendants . . . . .	379
233	Bronze trappings . . . . .	361	244	Variegated glass beads . . . . .	380
234	Bronze chains . . . . .	362	245	Plain glass beads . . . . .	380
235	Bronze bells . . . . .	362	246	Faience beads . . . . .	381
236	Bronze weights . . . . .	363	247	Stone beads . . . . .	382

## LIST OF PUBLICATIONS REFERRED TO

- BIBLICAL REFERENCES: Numbers 26, 28 ff. (p. 228); Joshua 17, 2 ff. (p. 228); II Kings 17, 24 (p. 60).
- ERNEST BABELON, *Les rois de Syrie, d'Arménie, et de Comagène. Catalogue des Monnaies Grecques de la Bibliothèque Nationale.* Paris, 1890.
- FREDERICK J. BLISS and R. A. STEWART MACALISTER, *Excavations in Palestine during the years 1898-1900.* London, 1902. In this work sometimes cited as Bliss-Macalister.
- BRITISH MUSEUM: *Catalogue of Greek Coins.* London, 1873 ff.  
     (vii) *The Ptolemies, Kings of Egypt* (Poole). 1883.  
     (xiv) *Mysia* (Wroth). 1892.  
     (xx) *Galatia, Cappadocia, and Syria* (Wroth). 1899.  
     (xxvi) *Phoenicia* (Hill). 1910.  
     (xxvii) *Palestine* (Hill). 1914.
- HENRY COHEN, *Description historique des monnaies frappées sous l'empire romain communément appelées médailles impériales*, 2d edition, 8 vols. Paris, 1880-92.
- HERMANN DESSAU, *Inscriptiones Latinae Selectae*, vol. i. Berlin, 1892.
- WILHELM DÖRPFELD, *Troja und Ilion.* Athens, 1902.
- HANS DRAGENDORFF, *Terra Sigillata. Ein Beitrag zur Geschichte der griechischen und römischen Keramik.* *Bonner Jahrbücher*, vol. xvi, p. 18 ff. 1895.
- BARCLAY V. HEAD, *Historia Nummorum*, 2d edition. Oxford, 1911.
- THE JEWISH ENCYCLOPEDIA. New York, 1901-6.
- JOSEPHUS, *Antiquitates Judaicae; Bellum Judaicum.*
- MARK LIDZBARSKI, *Handbuch der nordsemitischen Epigraphik.* 2 vols. Weimar, 1898.
- A. LUCAS, *Preservative materials used by the ancient Egyptians in embalming.* Egyptian Survey Department, Paper No. 12. Cairo, 1911.
- DAVID G. LYON, *The Harvard Expedition to Samaria.* *Harvard Theological Review*, vol. ii, p. 102 ff. 1909.
- R. A. STEWART MACALISTER, *Excavation of Gezer.* 3 vols. London, 1912.
- FREDERIC W. MADDEN, *The Coins of the Jews.* London, 1881.
- EDMOND POTTIER, *Etude sur les lécythes blancs attiques à représentations funéraires.* *Bibliothèque des Ecoles Françaises*, No. 30. Paris, 1883.
- GOTTLIEB SCHUMACHER, *Tell el-Mutesellim.* 2 vols. Leipsic, 1908.
- ERNST SELLIN, *Tell Ta'annek.* *Denkschriften der kaiserlichen Akademie der Wissenschaften in Wien, Philosophisch-Historische Klasse*, vol. 50. Vienna, 1904.
- GEORGE A. SMITH, *The Historical Geography of the Holy Land.* New York and London, 1894.
- IOANNES N. SVORONOS, *TA NOMISMATA TOY KPATOYΣ TΩN ΠΤΟΛΕΜΑΙΩΝ*, 4 vols. Athens, 1904-8.
- HENRY B. WALTERS, *History of ancient Pottery.* New York, 1905.
- WARWICK WROTH, *Imperial Byzantine Coins in the British Museum.* 2 vols. London, 1908.

## ABBREVIATIONS

- |  |  |
|--|--|
| <p>A. S.—Seleucidan Era, beginning 312 B.C.<br/>           Bab.-Grec. Pott.—Babylonio-Grecian pottery.<br/>           Bas.—Basilica (BAS on Plan 1).<br/>           B. F.—black-figured (ware).<br/>           bk.—black (debris, Pl. 53 b).<br/>           B. M. Cat.—British Museum Catalogue (of coins).<br/>           c.—cistern; construction trench (Pl. 53 a, b).<br/>           cist.—cistern.<br/>           cm.—centimetre.<br/>           C. T. or Cl. T.—Cliff Trench.<br/>           d. or diam.—diameter (D=upper, d=lower diameter of shaft, p. 161, note 1).<br/>           Dis. No.—Discard Number (see p. 45).<br/>           E.—East.<br/>           E-W—running East and West.<br/>           ex.—exergue.<br/>           f.—<i>femina</i> (woman); filling in (Pl. 53 a).<br/>           frag.—fragment.<br/>           h.—height.<br/>           H-H-H—courses of headers (in masonry).<br/>           H. S.—Southern extension of trench H (1908).<br/>           Isr. Pott.—Israelite Pottery.<br/>           l.—left; length.<br/>           L. T.—Lower Terrace.<br/>           L. T. E.—Lower Terrace East.<br/>           m.—metre; mason's debris (Pl. 53 a).<br/>           mm.—millimetre.<br/>           Maus.—Mausoleum, Plan 1.</p> | <p>N.—North.<br/>           N-S—running North and South.<br/>           N. G. T.—North Gate Terrace.<br/>           No.—number, occasionally used for Reg. No.<br/>           n.pr.f.—personal name of a woman.<br/>           n.pr.l.—proper name of a place.<br/>           n.pr.p.—proper name of a person.<br/>           obv.—obverse.<br/>           p.—page (pp. = pages); pavement (p. 111); pit, cup-mark (Pls. 1-54); projection (p. 191, note 1).<br/>           Pl. (Pls.)—Plate (Plates).<br/>           r.—right; rock.<br/>           Reg. No.—Registration Number (see p. 44).<br/>           rev.—reverse.<br/>           R. F.—red-figured (ware).<br/>           R. M.—red mark.<br/>           R. T.—Roadway Trench.<br/>           S.—South.<br/>           S-S-S—courses of stretchers (in masonry).<br/>           S1, S2, etc.—Strips 1, 2, etc. (see p. 35, note).<br/>           S. C.—Subterranean Corridor.<br/>           S. G. T.—South Gate Terrace.<br/>           subt. corr.—Subterranean Corridor.<br/>           th.—thickness.<br/>           w.—width; weight.<br/>           W.—West.<br/>           y.—yellow (Israelite) debris (Pl. 53 b).</p> |
|--|--|

## ADDITIONS, CORRECTIONS, AND EXPLANATIONS

Letters A, B, C, etc., indicate trenches (1908). See page 7.

Letters a, b, c, etc., after strip numbers (as S5 a) indicate working sections (*q. v.*). In the labels of Plates 1-54 small capitals are used, to agree with the rest of the text.

Arabic numerals 1-11 on the face of photographs on Plates 1-54 indicate periods of time from Omri (1) to the Arabs (11). See page 93, note 2. On the photographs of Plates 55-90 Arabic numerals indicate objects, without reference to periods.

Arabic numerals after strip numbers (as S7-772) indicate rooms, streets, etc.

Roman numerals I-IV after strip numbers 1 and 2 indicate periods of time, as explained on page xxii, Vol. II.

In lists of objects enumerated by letters or numerals the occasional break in the sequence (as at page 287 7 a,c; 329 5, 7) indicates no omission of subject-matter.

A plus sign (+) after a registration number indicates that two objects belong together. On the face of a photograph this sign is employed as a means of reference. A cross (×) or an arrow is used in the same way.

The term Babylonio-Grecian is employed to denote the period extending, in round numbers, from 700 to 300 B.C.

Jeroboam II is tentatively held to be the king who enlarged the palace of Ahab. Occasionally the uncertainty is expressed by a question-mark, and is to be borne in mind even when not so expressed.

Kaid's Land. See pages 220, 393, 394.

Samarra's Land. See pages 220-223, 394.

Sebaste. The new name given to Samaria in honor of Augustus, when Herod rebuilt and adorned the city. The present village (name locally pronounced Se-búst-ye) occupies part of the eastern half of Sebaste.

Sub. See page 44.

Working Sections. The sub-divisions of the strips into which the summit was divided for excavation. Each section was excavated by its own gang of workers.

Plate 15 d: For Oct. 1 read Oct. 21.

Plate 45 a: For Nov. 18 read Nov. 13.

Plate 46 d: For 1910 read 1909.

Plate 49 d: For 1910 read 1909.

Plate 54 b: For 747 read 741.

Plate 85 d: For an d read and.

PART I  
EXCAVATIONS IN 1908

BY

DAVID GORDON LYON



## CHAPTER I

### INCEPTION AND CONDITIONS OF THE WORK

In January, 1905, Mr. Jacob Henry Schiff, of New York, offered to provide the sum of fifty thousand dollars for the purpose of undertaking excavations in Palestine under the auspices of the Semitic Museum of Harvard University. This offer was coupled with the condition that permission to dig should be secured within six months from the Turkish authorities. The limit of time was later extended to October, 1906. To meet the initial expenses involved in our application Mr. Schiff provided an additional sum of five thousand dollars.

A committee on exploration in the Orient, consisting of Professors David G. Lyon, George F. Moore, and Crawford H. Toy, was appointed by the University to superintend the enterprise. On the recommendation of this committee Doctor (later Professor) George A. Reisner, who had had long experience as explorer in Egypt, was appointed field director of the expedition.

The next step was to select a site and apply for a permit. Such permits were granted by the Sultan on the recommendation of the Director of the Imperial Ottoman Museum at Constantinople. The choice of the committee was Samaria; but this choice was provisional, because of a rumor that certain German explorers were applying for that site. The rumor was unfounded, and the application was made.

Ordinarily tedious delays attended the granting of permits to explore in Turkey, due in part, it was said, to the frequent non-observance of the laws relating to antiquities. It was our hope that by convincing the authorities at Constantinople of our intention to observe the law scrupulously we might escape the usual long delay.

Early in November, 1905, Dr. Reisner reached Constantinople, bearing letters to the Sultan from Charles W. Eliot, President of Harvard University, and from Theodore Roosevelt, President of the United States, in support of our application. The Hon. John G. A. Leishman, American Minister (later Ambassador) to Turkey, and the other members of the Embassy, took a lively interest in our enterprise, and on this and subsequent occasions aided us to the extent of their ability. His Excellency Hamdy Bey, director of the Imperial Museum, received our petition in a cordial manner, and gave verbal assurance that we should be allowed to excavate Samaria. It was understood however that the actual permit could not be expected before the promulgation of the new form of the laws relating to antiquities, at that time undergoing revision.

Notwithstanding this assurance, the permit was not actually granted till the autumn of 1907. The long interval was occupied with much irksome and costly work and waiting on the part of Dr. Reisner and members of the Orient Committee, the tedious details of which need not here be recited. The causes of delay were

obscure, but the attitude of the officials at Nablus, seat of the local government to which Samaria belonged, was obviously in part responsible.

In October, 1906, the period named by Mr. Schiff for getting the permit expired. Accordingly, further expenditure in the matter was stopped. But our application was allowed to stand, because we hoped that, if it should ever be granted, Mr. Schiff might renew his offer, or some other patron might be found to provide the necessary means. In view of the uncertainty regarding Samaria, Dr. Reisner, with the approval of President Eliot and the Orient Committee, accepted an invitation to engage for three years in archaeological work for the Egyptian government.

When a year later, in November, 1907, news came to Cambridge that the permit had been granted, we had neither money nor explorer. But Mr. Schiff generously renewed his offer, though not without misgiving, and Dr. Reisner reported that he could make it possible to spend at Samaria part of April and May in 1908. Climatic conditions in Palestine make excavations at an earlier date impracticable. Dr. Gottlieb Schumacher, of Haifa, long a resident of Palestine, who had had considerable experience as an excavator, was engaged as field director, with the understanding that he and Dr. Reisner should together plan and begin the excavation in April.

In order that a member of the Harvard staff might be present after Dr. Reisner's departure from Palestine, the University, through the generosity of the Hon. Isidor Straus, of New York, in April sent Professor Lyon to Samaria. With him went Mr. Clarence S. Fisher, of Philadelphia, as architect to the expedition. Mr. Fisher had seen service of this character in Babylonia as member of the Philadelphia Expedition to Nippur. He showed himself so efficient at Samaria that he was engaged for the two subsequent years, 1909 and 1910. Three weeks preceding the first period of digging were devoted by Dr. Schumacher to work of a preparatory nature, surveying the site, engaging living quarters, and communicating with the authorities at Nablus, Haifa, and Beirut. In this work he was assisted by Mr. Oric Bates, a graduate of Harvard, who was associated with Dr. Reisner in exploration in Egypt.

On Friday, April 24th, 1908, Drs. Schumacher and Reisner discussed and agreed on methods of work, reports, and accounts, and digging began at the site of some standing columns beside the village threshing-floor. A second site was chosen on the western side of the summit, at which work began on Monday, April 27th. Rain stopped the work on the afternoon of the 28th and all of the next day. On the 30th serious trouble began with a communication from the Nablus authorities, demanding of the explorers: (1) A plan of the Sebaste fields, showing what lands our work would render unfit for cultivation, ostensibly with a view to the equitable adjustment of the taxes. (2) The receipts for payments already made to the villagers for land. (3) The decision of the Commission and the Administrative Council of Nablus, given in September, 1906, fixing the prices to be paid by the expedition for land and trees. With these demands came a threat to stop the work. The explorers replied that they could not

surrender the only copy they had of the decision of the Commission and the Administrative Council. On May 1st the commissioner, who was too young and inexperienced for his post, brought orders from Nablus to allow no further work. There had been five and a half days of actual digging with a small force, and the work was for the time at an end. Several days were devoted to communications between the explorers and the authorities at Beirut and Nablus, but all to no avail. Dr. Reisner and his Egyptian workmen returned to Egypt, whither Mr. Bates followed not long after.

A second period, May 22 to June 3, was devoted to further digging in the trenches laid out in the first period, but interferences by the local officials were soon renewed in an aggravated form. The demand now was that payments should be made at Nablus in the presence of the authorities. To this the villagers were, for obvious reasons, unalterably opposed. It now became clear that continuation of the work was impossible, unless relief could be found at Constantinople. A journey thither by Dr. Schumacher and Professor Lyon was accordingly undertaken.

Before closing the work for this trip it seemed desirable to carry a shaft down to rock at some point in trench G, which had been started across the summit, in order to discover the nature of the successive strata. On June 3d was made in this shaft our first noteworthy discovery, a section of a well-preserved stairway, the uppermost step at a depth of some two and a half to three metres below the surface. (Plate 85 g and h.) The stairway ascended from the north, and supposedly led up to some important building on the south. Our third period of digging proved this conjecture to be correct. Portions of fourteen of the steps were brought to view. The work closed on June 3d. It was most tantalizing to leave the spot, as we did on June 5th, before seeing top or bottom or either end of this imposing stairway.

While awaiting in Beirut a steamer for Constantinople, Professor Lyon, in order to explain our situation at Samaria, called with the American Consul-General, Mr. G. Bie Ravndal, and the consular dragoman, Mr. Constantine Chouri, both of whom were always most obliging, on the governor of Beirut, in whose territory the district of Nablus and the village Sebaste lie. As a result of this visit the governor promised to instruct the authorities at Nablus to molest us no more. In regard to a commissioner he said that he had no power, since this official was an appointee of Hamdy Bey.

At Constantinople on June 18th Dr. Schumacher and Professor Lyon had a brief interview with Hamdy Bey, who asked for a written statement of their complaint. This was presented two days later. When Hamdy Bey had finished reading it, he said: "I promise you complete satisfaction. I have labored in this place twenty-five years in the interest of science, and no one shall cast a stone in your way." Our later experiences proved the genuineness of this promise. Further details were arranged with Khalil Bey, Hamdy Bey's brother, and later his successor as director of the Museum. From him we had the promise of a commissioner of more maturity and experience, a promise which was also fulfilled.

On July 6th we were at Nablus again, and were not a little amused on our formal visit to the local governor to be informed that his reason for insisting that we should make payments to the natives not at Sebaste but at Nablus had been to save us from subsequent trouble. Such payments would certainly have involved us hopelessly with the natives.

Returning to Samaria, we spent two days in setting up tents and moving into them on the second terrace to the west of the summit, where we escaped the unsanitary conditions of the village, and could enjoy the pure air, refreshing western winds, and fine views toward the Mediterranean. In this new location the nights were particularly agreeable.

On the 10th our new commissioner arrived. His interest and loyalty did much to ease our pathway. The revolution in July, which overthrew the existing political order in Turkey and transferred the power to the party of the Young Turks, was also of advantage to us. The change was profoundly felt in Palestine, and the new interest turned attention to other affairs than our work at Samaria. The commissioner was of the Young Turk party, and by his frequent visits to Nablus kept himself and us informed as to the course of events.

In the third and last period of excavation in 1908, extending from July 11 to August 21, we began with one hundred and thirty workers. The number increased rapidly, and arose to nearly four hundred and fifty by August 3d. Toward the close the number averaged about two hundred. The reduction was partly due to the lack of a sufficient number of trained foremen. Our workers came from Sebaste and the neighboring villages, in many cases walking both ways daily, a distance of several miles. They consisted of men, women, and children, the men for digging, all others for bearing the rubbish in baskets on their heads and dumping it at the places designated. The tools were primitive, and labor-saving devices unpopular. Some wheelbarrows were provided, but no skill in the use of them was developed.

## CHAPTER II

### SUMMARY ACCOUNT OF THE EXCAVATIONS OF 1908

See Volume II, Plans 14-16

During the first period, April 24 to May 1, work was begun at three points, the threshing-floor, which is just west of the village, the summit, and the first two terraces west of the summit. At the ruins near the threshing-floor, where the standing columns were supposed to indicate the four sides of a building, four trenches were started, named respectively A, B, C, and D. Trench A ran east and west on the descending slope north of the building; trench B was just north of a standing column which seemed to belong to the southern side of the building; trench C, which, like B, was little more than a shaft or pit, was east of B and outside the line of the eastern, lower row of columns; trench D ran from the northern slope south on the line of the eastern row of columns. In B, at a depth of two metres, a pavement was found, and the column within the pit stood askew on its socle, as if its position had been shifted by an earthquake. (Plate 85 c.) In D the bases of four columns were found in line with the eastern row of columns. (Plate 85 d.)

On the summit and to the west three trenches were started running almost in a line east and west for a distance of 140 metres. Trench E ran from about the middle of the second terrace to the embankment supporting the first terrace (Plate 88 b); trench F, from this point to the embankment supporting the summit plateau (Plate 87 f); trench G, thence to a point about half way across this plateau (Plate 85 f). In trench E, just below the surface, was a complex series of walls built of rough stone. Trenches F and G were little more than begun. In them were found fragments of glass and good pottery and several Rhodian jar handles with seal impressions. (Plate 89 h.)

In the second period, May 22 to June 3, the work of deepening the trenches begun in the first period was continued. The number of objects found which were considered worthy of registration was fifty-six. The only notable discovery was that of the stairway, as recorded above.

In taking up the work for the third time, July 11 to August 21, we naturally felt special interest in G, in which the stairway had been found. When fully dug out the stairway was of imposing dimensions. (Plate 86 a b. Compare Plates 22 a; 19 b.) For description and history of the stairway see below, Part III, Chapter IV 1 a, p. 174.

On July 11 two new trenches were begun: I, starting near the eastern end of the stairway and running toward the north; H, starting near the same point and running toward the south. Three days later there was found in H, about

80 centimetres below the surface, a plain mosaic floor. The portion cleared measured about two by two and a half metres. (Plate 88 c 1.) This floor, as appeared later from traces in the eastern wall of the trench, extended for at least seven metres north and south. In removing the surface layer south of the great stairway, there was found about three metres distant, and at a depth of forty to fifty centimetres, a large pavement or floor of thick blocks of stone varying much in size. (Plate 86 c 3. Compare Plate 6 a 10, upper right hand, view from SE in 1909.) This pavement was cleared, but was not otherwise disturbed, except for a narrow, shallow cut near its western end. When built it was presumably as wide as the stairway, and formed part of the building to which the stairway led. In trench G were found, dumped in a heap, quantities of painted stucco in small fragments, which crumbled rapidly on exposure to the air. Similar fragments were found at a later date in trench F.

On July 21 was found in trench H a human skeleton, about 1.20 metres below the surface, and 20 centimetres below the mosaic floor just mentioned, which had been cut through to receive the body. The skeleton lay on its right side, with head to the west and face to the south.

On July 23 rock was reached on the second terrace at the eastern end of trench E, at a depth of about 9.5 metres. A few inches above rock were found several large, hewn building stones, two of which bore letters or masons' marks. (Plate 90 e.) The stones seem to show Hebrew workmanship, and the letters may be Zayin and Tau. (See Part III, Chapter I 1 e, Nos. 8 and 2, p. 119.) Similar stones were found at a later date resting on the rock in front of the western half of the great stairway. (Plate 90 f 1 and Part III, Chapter I 1 e, No. 7, p. 119.)

On the morning of July 24 was found the votive altar photographed on Plate 59 d, and described in Part III, in connection with Fig. 91, p. 176. For the inscription see next chapter, Inscriptions, Latin, No. 30. It was lying on the third lowest step of the stairway, about four metres below the surface, and near the great altar, the discovery of which is reported a little further along. It may be that this altar formerly stood beside the great altar in the manner of one which was actually found in that position. (Plates 87 c; 18 c.)

Late on Saturday, July 25, the workmen came upon an opening in the rubbish to the west of the stairway. (Plate 87 g 1. In this view the opening, 1, is a window (p. 186, Fig. 104), 3 the bottom step of the stair, and 2 the supporting wall. Compare Plate 87 e, where 2 = supporting wall, 6 = bottom step.) Excavation of the spot revealed a large, deep, vaulted chamber, the eastern wall of which was cut in part in the native rock. (Plates 87 h; 88 a.) The other sides were of massive masonry. The excavation reached the floor (Plate 88 a 2), and partially cleared a cistern beneath the floor. (Plate 88 a 3.) The eastern section of the arched roof was still in position. (Plate 88 a 1.) Through a door on the north a flight of steps led down into the vault. (Plates 88 a 4; 22 b 11.) Through another door there was access from the west. (Plate 22 b, c.) Considerable portions of the walls were still covered by a heavy coating of plaster. The final clearing of vault and cistern, as well as of a second cis-

tern in the vault, was accomplished in 1909-1910. (Plate 22 c, d, and for description of the vault Part III, Chapter IV 1 a, p. 173.)

To the west of the paved platform were various structures, with masonry similar to that of the vault. In one of these used as a storeroom were found five amphoræ for liquids. The Preliminary Report (p. 38) states that these vessels fell to pieces.

In removing the great mass of debris in front of the stairway (Plate 87 a 1), was found on July 27 in trench I, at a depth of 5.7 metres, the torso of a white marble statue of heroic size. (Plates 87 a 2; 86 h 1; compare 79 f and e.) It was lying on its back, about 2.35 metres north of the stairway and parallel therewith, its under surface somewhat lower than the bottom step of the stairway. It rested on a thin layer of dark earth. Under this was a beaten or trodden ash-colored surface, which was, as appeared later, part of the earthen floor of the sacred tract about the altar. The upper part of the body was toward the east. Head, arms, and legs were gone, but portions of the feet were preserved on the base. This base, the thickness of which was 13 to 14 centimetres and its sides 90 x 91 cm., was united to the trunk by a strong block 43 x 30 cm. in section. Trunk, block, and base were all of one piece. The distance from the neck to the top of the base is about 2.37 metres, from which it would appear that the original height of the statue was approximately three metres. In the neck was a small socket for holding the head in position by means of a dowel. The fragment of a large head (Plate 86 e 1) was found on August 20th on the summit plateau, near the southern border, at the depth of about 2.5 metres. This fragment is 22 cm. wide, 16 high, and 13 thick. The crown, back of the head, ears, mouth, chin, and nose are gone. Whether the head ever belonged to the statue remains uncertain. The color of the stone was different, and the quality seemed to be different. The fragment of a marble hand found between the altar and the stairway may well have belonged to the statue. (Plate 86 e 2.)

On the right breast of the statue (Plate 79 f) a medal or other decoration is represented. Above the waist the body is dressed in a close-fitting garment; below, in a short skirt with flounces. All the details are carefully wrought out. Considering the quality of the marble, the pose, the workmanship, the dress, we regarded the statue as most probably that of a Roman Emperor. In this event it is natural to think of Augustus, to honor whom Herod rebuilt and renamed Samaria, and erected a temple near the spot where the statue was found. For further description of the statue see Part III, Chapter IV, after Fig. 91, p. 176.

From July 30th the area of excavation was restricted, because it had become evident that not all the work which had been laid out for the summer could be accomplished. Henceforth digging was confined mainly to the summit and trench F.

In widening trench H toward the west the massive foundation of a wall had been found, beginning at the southeastern corner of the paved platform and extending southward almost to the edge of the plateau. (Plate 88 f 2 2,

g 2 2, h 2 2.) This we believed to be the foundation of the eastern wall of the Herodian temple, a belief confirmed by the investigations of the two following years.

Excavation of the space between the platform and the stairway was begun on August 4th by running a trench east and west. Near the east end of this trench was found, resting on a broad, rough wall (Plate 86 d 1), the base of a massive column turned upside down. Subsequently two similar bases were found in line with the first, likewise overturned. (Plate 86 d 3.) They evidently once supported columns on the front of the temple. The overturning was probably caused by the work of extracting for other uses the stone slabs on which the bases rested. See for further account of these bases Figs. 111, 112 and text.

When the excavation of trench H was approaching the rock on the east of the platform, we encountered great quantities of blocks and fragments of hewn stone piled in a disorderly heap. (Plate 88 d 1 1 1.) Many of the blocks were elaborately carved, like those of Plate 89 b; 89 a, the latter placed by our workmen on one of the overturned bases. All came, of course, from the buildings which once stood on the site. Underneath them on the rock was found a thin layer of ashes mingled with charred bones and other evidences of the action of fire.

In the same trench were found fragments of capitals and columns built into the lowest course of stones forming the foundation of the wall which supports the platform on the east. In the wall crossing trench H near the platform may be seen the drum of a column thus built in. (Plate 88 e 1. Plate 88 d gives the north side of the same wall.)

Clearing away of the debris east of the stairway brought to light a circular press for wine or oil cut in the rock. (Plate 18 a.) Nearby were several funnel-shaped holes in the rock, so-called "cup holes," such as are found throughout Palestine, which were made for supporting the pointed jars used in the country. The western half of the press was covered by the wall. The press was of early origin, and probably antedates Omri's buildings on the site. See for further description of the press Fig. 17 and text in Part II, Chapter III, p. 67.

Perhaps the most interesting discovery of the summer was the great altar, which came to light in the early morning of August 8th. (Plate 86 g.) It was formerly covered with plaster, some of which was still in place, spotted here and there with remains of red and green paint. It stood in front of the middle portion of the stairway, very near it, and at a somewhat lower level. These facts seemed to indicate that the altar was older than the stairway, and we supposed it to be of Herodian origin. Plates 87 a, b, c, d; 18 c show successive stages in the emergence of the altar. For description of the altar see Part III, Chapter IV, Fig. 89 and text, page 174. The altar rests on a foundation of rubble or rubbish, as is seen in Plates 18 b; 87 e (beneath 4), and is not substantially built. On a level with the bottom of the altar was a floor of packed earth, which underlay the statue also, and extended to unknown limits east, north, and west. Plate 18 c shows a portion of this floor. The line of the floor was also visible in the eastern wall of trench I. Plates 18 b and



87 d give views taken before the removal of a ramp (87 d 2) composed of roughly laid stones on the northern side of the altar. This ramp, ascending from the north to the cornice at the top of the altar, is clearly younger than the altar and of uncertain use. It was 3.55 metres wide, and its base 6.45 metres long. Between the bottom of the ramp and the trodden floor was a layer of earth 20 to 25 centimetres thick. In the eastern wall of trench I, about half a metre below the level of the Herodian floor, was a heavier whitish bed, about 20 centimetres thick, marking apparently an earlier floor.

On the eastern side of the altar, in a row running north and south, were four bases (Plate 18 c), on each of which formerly stood, presumably, a votive altar, like one found on the stairway, as already reported. One of the bases had a plain top. The three others were provided with sockets, and in one of these stood a votive altar, in height 95 centimetres. For description see Part III, Fig. 90 and text, page 175. On the front of the altar was an inscription (Plate 59 e) of twelve or thirteen lines, nearly all of which had perished from weathering or rough treatment, except the last three lines. These three are written largely in abbreviation. For the inscription see in next chapter Inscriptions, Latin, No. 31.

On August 19th the digging reached rock on the west of the altar, where were found, as already mentioned (above, p. 8), certain hewn stones of Hebrew workmanship. On Plate 87 e 1 = rock, 2 = supporting wall at foot of stairway, 6 = bottom stair, 5 = accumulated debris, 3 = southwest corner of altar, 4 = stone foundation resting on rubble.

On the northeast of the altar, in trench I, the rock is cut away to the depth of about two metres, in a line running east and west. For explanation of this scarp see Part III, I 1 a, page 93. A few feet north of this cut was found what looked like the round or oval drum of a column. (Plate 86 f 1.) When fully dug out this proved to be the whole column, cut out of the rock, to which it was still attached. (Plate 86 f 2.) Beyond it was the lower part of an old wall running east and west. (Plate 86 f 3.)

In the pit containing the column, about 1.6 metres below the top of it, were found many fragments of stucco in a variety of colors, white, black, pink, and yellow. These bits, some of which were decorated with dentils and moldings, crumbled badly on exposure to the air. Two of the black fragments had rude scratchings in the stucco representing a bird and an animal. See Part I, Chapter III, I B a 5 and 6, p. 17, and Plate 90 b 4 and 6. Others had fragments of Greek inscriptions scratched upon them. (Plate 90 b 1 2 5, and Chapter III, I B a 1-3, p. 17.) Nos. 7-10 of Plate 90 b were uninscribed.

Dr. Schumacher paid special attention to the architectural remains found on the summit, and Mr. Fisher did the same for those of the building near the threshing-floor, but these preliminary studies are largely superseded by the fuller and more elaborate accounts of Parts II and III.

The explorers naturally felt particular interest in remains from the Hebrew period. Inasmuch as Omri seems to have been the first to build on the hill, they believed that such remains would be found in the lowest stratum. The

evidence was, of course, much confused by the building operations of later periods, which easily transferred small objects, like pottery, from lower to higher levels. Nevertheless, expectation was not disappointed.

In trench H the builders of the Herodian temple usually laid its foundations on the rock, sometimes cutting through older walls to reach the rock, and sometimes using them as part of the foundation. (Plate 88 h 1 3.) In some cases it was believed that these older, massive walls might be Hebrew. The discovery that they were in fact part of the palace of Omri and Ahab was reserved for the subsequent exploration of the site.

We have already seen that Hebrew building-stones were found on the rock just west of the altar, and at the eastern end of trench E. Here at least was positive evidence of Hebrew occupation. Certain massive walls on the rock in trench F gave similar evidence. A great wall found by tunneling between trenches E and F was held to be Hebrew, and attracted particular attention. Moreover, the pottery from the lower levels of these trenches seemed characteristically Hebrew.

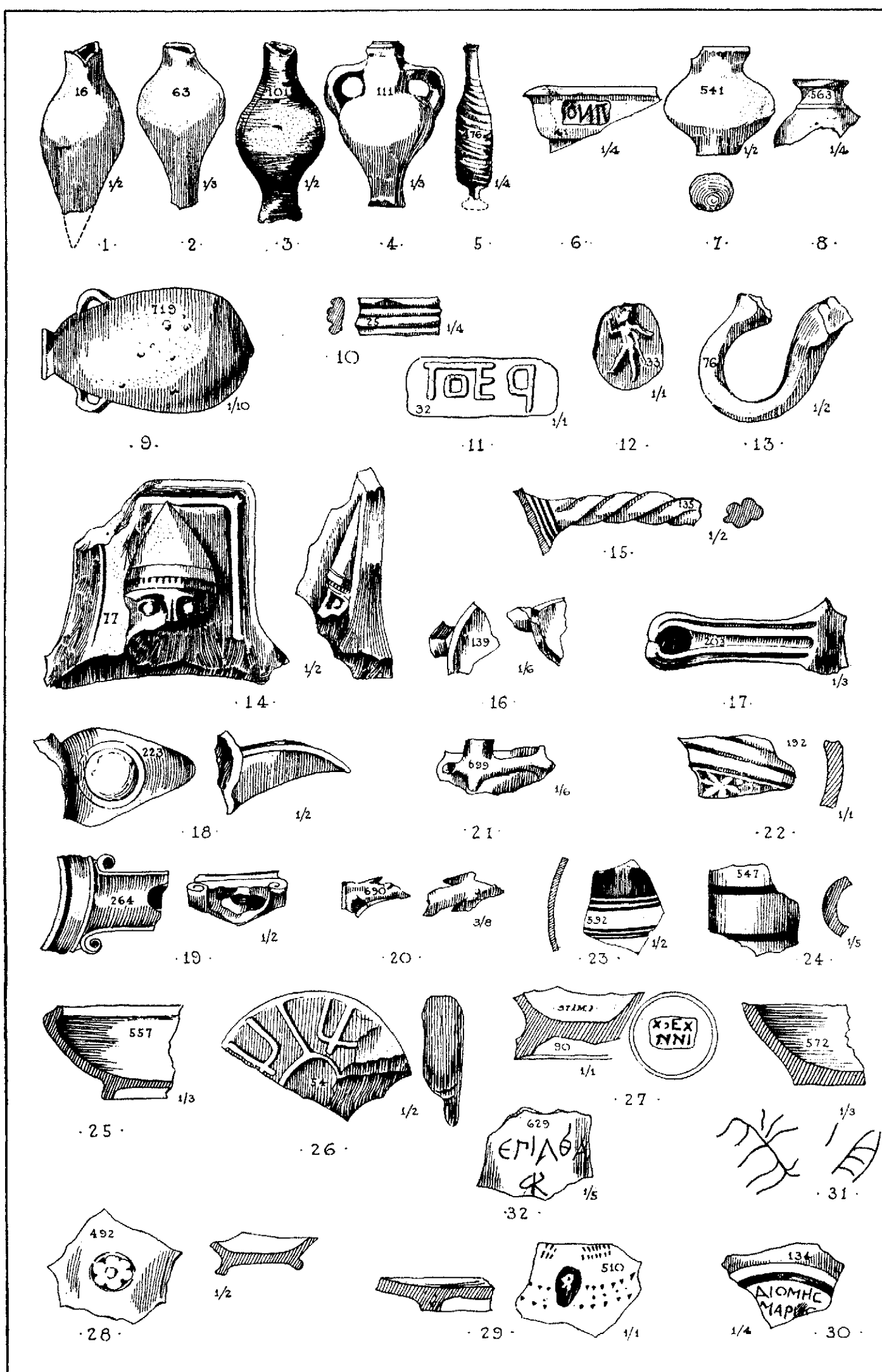
Commenting (Preliminary Report, unpublished, p. 45) on the building-stones, walls, and pottery fragments from the lowest levels, Dr. Schumacher remarks: "From these discoveries we may judge that the Israelite layer covered the bare rock surface; and, as the Tell el-Mutesellim 'Palast' building, showing such close resemblance with the Sebaste Israelite stratum, is dated about the 8th century B.C., we may be safe in calling it remains of Ahab and Jezebel's structures of the 9th century B.C."

Excavation ended on Friday, August 21st. A week was devoted to making measures and copies, preparing duplicate lists, photographing, settling accounts, turning over to the commissioner all movable antiques, and so forth. The statue, because of the cost and difficulty of transport, was boxed in heavy boards, and left on the spot. We broke up camp on August 28th.

In January, 1909, Dr. Schumacher's Preliminary Report of the work of the season reached Cambridge. Owing to the complexity of the problems presented by the Samaria ruins and to the necessity of further work for the solution of these problems, it did not seem wise to the Committee to publish the Report.

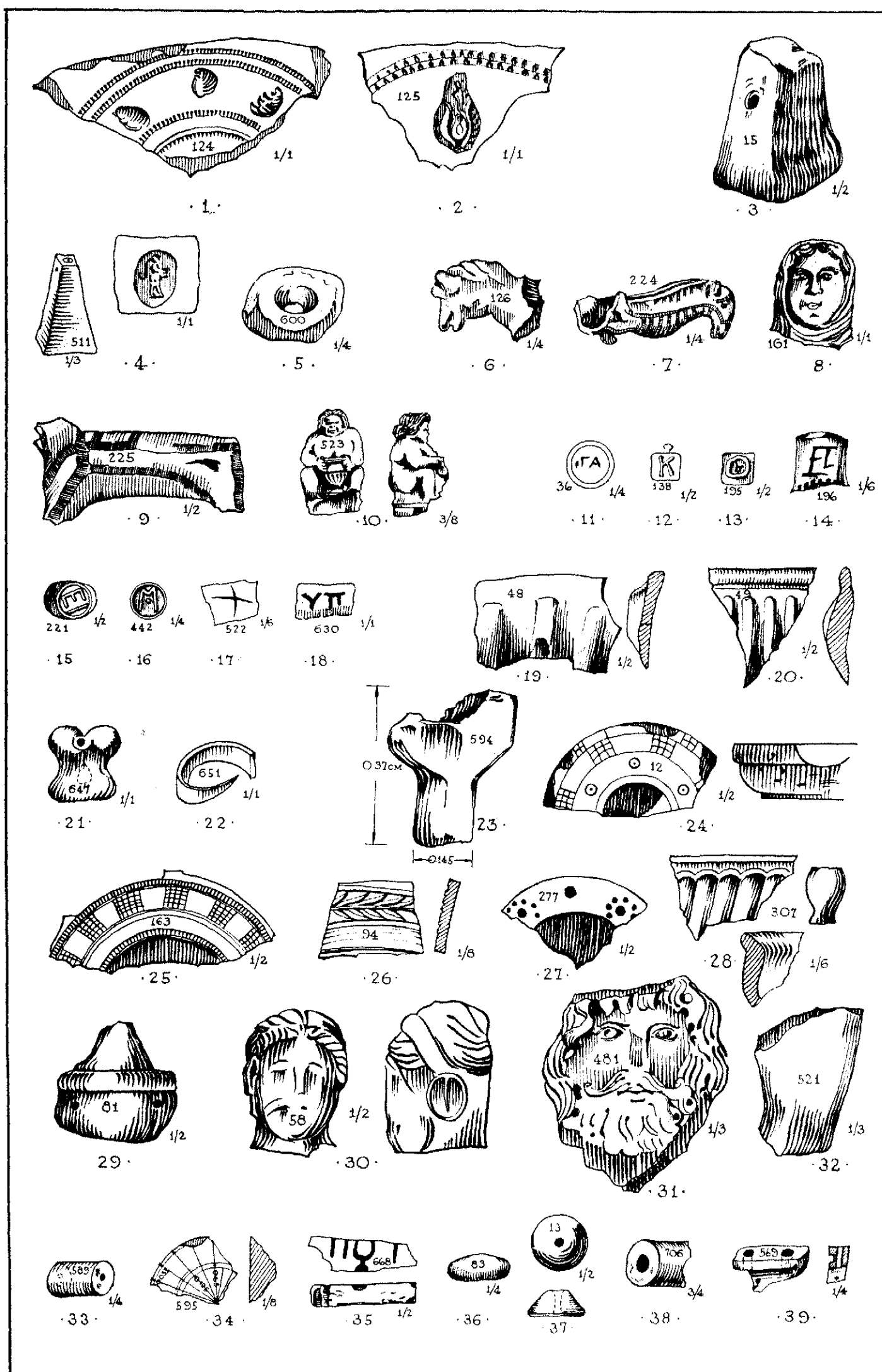
The Director of the work in 1909-1910 found much inconvenience from the dump heaps of 1908, because they had all to be moved again. Dr. Schumacher in the Report recognized that this would be the case if the excavations were continued. The only excuse, of course, for dumping on unexcavated surfaces is found in the seriousness of the difficulties encountered in 1908 and the uncertainty whether the work could be continued. With this went the natural desire to use expeditious methods in seeking evidence of the importance of later excavation.

It was Dr. Schumacher's wish not to continue after 1908 as director of the excavations. At the time when he made this wish known changes were taking place in Dr. Reisner's other engagements which made it possible for him to take up the work at Samaria, as originally planned. The results under his directorship are given in Parts II to IV.

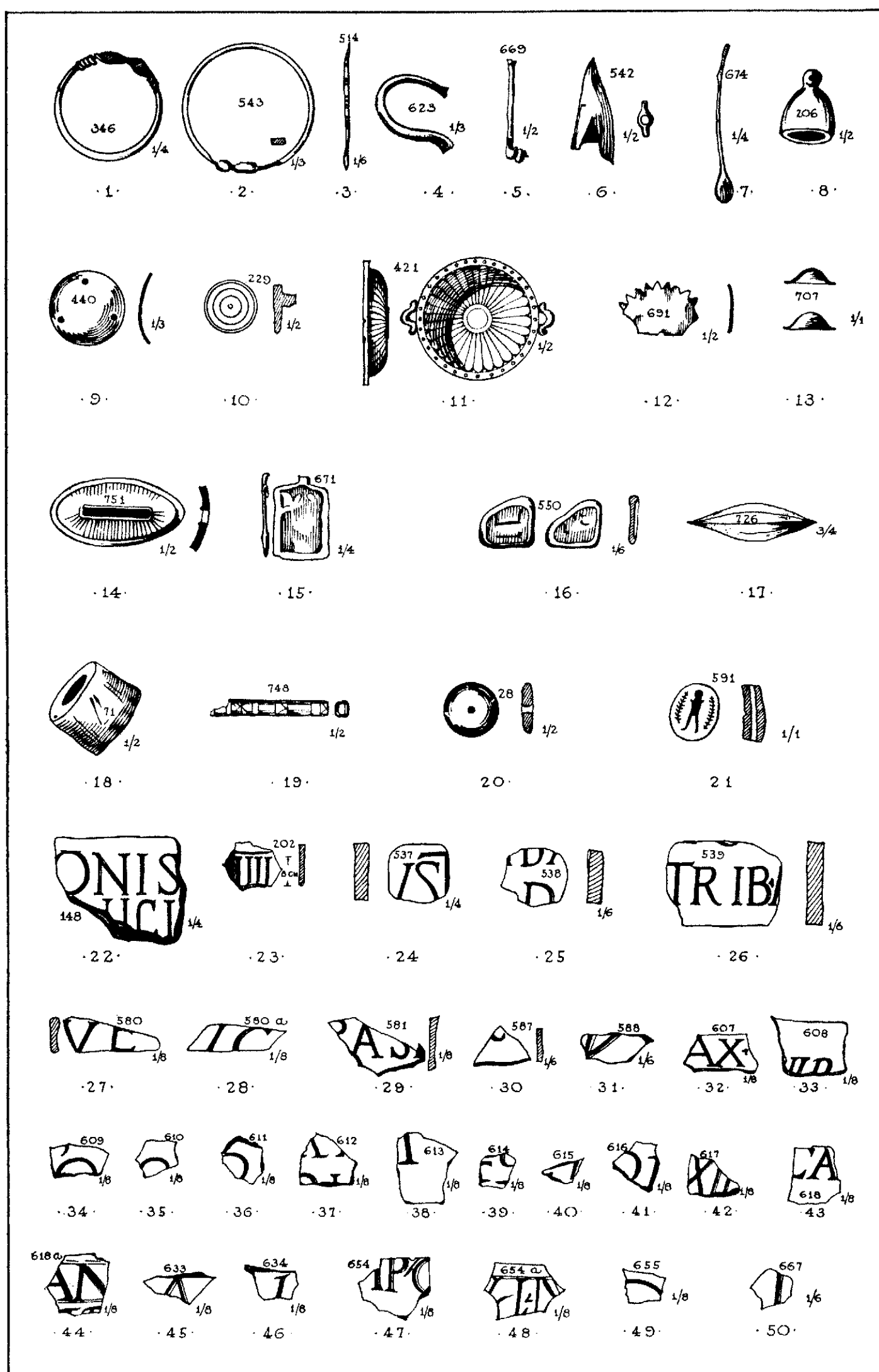


**Pottery:** Nos. 1-5, Bottles; 6-9, Jars; 10-21 (except 16, which is stone), Handles and Handle Stamps; 22-32, Fragments.





**Pottery:** Nos. 1-2, Plates; 3-5, Weights; 6-10, Figurines. **Potter's Marks:** 11-18. **Glass:** 19-22.  
**Stone:** 23-39, also p. 13, No. 16, and p. 14, No. 7.



Metals: Nos. 1-15, Bronze; 16-17, Lead. Bone and Ivory: 18-21. Inscriptions: 22-50.

## CHAPTER III

### DESCRIPTION OF OBJECTS FOUND IN 1908

The work of registering, sketching, and describing the objects was done by Dr. Schumacher. Unfortunately the exigencies of the work did not always allow time for cleaning and careful study of the objects. This remark applies particularly to most of the coins. As a result it is impossible to give a satisfactory account of all the objects catalogued. The loss, however, is perhaps not so serious; because not much was found in 1908 which is not represented in the finds of 1909-1910, and these are happily given fully in the account of those years. The descriptions in the preceding chapter of the larger architectural and sculptured objects are much abbreviated, in order to avoid duplication of the ample account given in Part III, Chapter IV, p. 167 ff.

The Register of 1908 includes 782 entries, though a few of these cover more than one object. About two-thirds of the objects fall under three classes: coins 103, lamps 277, and amphora handles 206, a total of 586. Nearly all the other material found may be grouped under the heads of inscriptions, pottery, and objects in stone, metal, glass, bone, and ivory. Many of these are described in this chapter, with references to pages 13-16, to Plates 84-90, and occasionally to other plates.

#### I. INSCRIPTIONS

With few exceptions the inscriptions come from the immediate vicinity of the great altar. Division B (Greek) includes: 1. The writing scratched on stucco and pottery and that which is painted on pottery; 2. Jar Handle Stamps; 3. Potters' Marks.

##### A. ARAMAIC OR HEBREW

- |   |  |
|---|--|
| 1. 6, A, 1.8 m. <sup>1</sup> Fragment of stucco (9 x 6 x 3) painted red, with four Hebrew letters, appar- | ently לֹאֲכֶלָּה (h. 4 to 6 mm.), scratched through the paint. |
|---|--|

##### B. GREEK INSCRIPTIONS AND GRAFFITI

###### a. ON STUCCO.

- |   |  |
|---|--|
| 1. 734, I (northeast of altar, under level of Herodian floor), 9 m. Fragment of stucco (8 x 4.5) containing portions of four lines. Reading in part uncertain: OYPΘEI OICENO ΛΕΔ O. Plate 90 b 1. | 4. 735, I, 9 m. Fragment found with 1-3. Two straight lines forming an angle, the longer 3.5 cm., the shorter 2 cm. Uncertain whether these form part of a letter or of some other figure. Plate 90 b 3. |
| 2. 737, I, 9 m. Fragment (4.8 x 3.5) found with No. 1. Portions of two lines; first ending €I (?); second, P, Φ, or Ψ. Plate 90 b 2.  | 5. 736, I, 9 m. Fragment (5 x 4.2 x 2.8) with crude scratchings representing hind legs and tail of a quadruped. Plate 90 b 6.  |
| 3. 738, I, 9 m. Fragment (ca. 5 x 2.5) found with 1 and 2. Portions of apparently four lines, the last ending ΠPO. Plate 90 b 5.  | 6. 742, I, 9 m. Fragment with figure of body, legs, and tail of a bird? Length of figure 4.5 cm. Plate 90 b 4.   |

<sup>1</sup>The first item in these descriptions gives the running number in the respective divisions; the second item, the number as recorded in the Register; the third, the trench in or near which the object was found; and the fourth, the depth below the surface. Then follow name, dimensions, and description of

the object, with reference to cuts (pp. 13-16) and to photographic reproductions (Volume II, Plates 84-90). Depths are given in meters (m.), and dimensions in centimeters (cm.). L. = length, h. = height, th. = thickness, d. = diameter.

## b. ON POTTERY.

1. 134, G, 2 m. Scratched on the bottom of a plate in two lines: ΔΙΟΜΗC|ΜΑΡΙΑC. Page 13, No. 30; Plate 89 f 3. See under III H, No. 6 (p. 24).
2. 629, F, 4.5 m. Scratched on fragment of neck of jar: ΕΠΙ|ΑΘΑ|. Page 13, No. 32. See III G, No. 3 (p. 23).
3. 631, F, 5.3 m. Six letters painted brown on a fragment of pottery: ΑΟΥΨΟΙ|? Page 14, No. 1. See III G, No. 12.
4. 673, G, 3 m. The word [ΙΠ]ΠΟΚΡΑΤΕΥC painted in bright red on neck of jar. Page 14, No. 3. See III G, No. 4.

## c. JAR HANDLE STAMPS.

Of the 206 Rhodian Jar Handles 33 have circular, the others rectangular stamps. Some seventy of these are partly or altogether illegible. About half of the stamps begin with the preposition ΕΠΙ, followed by the name of an official, in a few instances by the word for priest and then the name of the official. The following list of about 155 stamps is arranged alphabetically according to the name of the man, or, in case there is none, according to the name of the month. The numbers following the stamps are the registration numbers.

- ΑΓΑΘΟΚΛΕΥΞ 127.  
ΕΠΙ ΙΕΡΕΩΞ[ΑΓΑΘΟ]ΚΛΕΥΞ 211. Lily.  
ΑΓΡΙΑΝΙΟΥ|ΑΓΑΘΟΚΛΕΥΞ 102.  
ΥΑΚΙΝΘΙΟΥ|ΑΓΑΘΟΚΛΕΥΞ 661.  
ΕΠΙ|ΑΓΕ ΣΤΡΑΤΟΥ|ΑΡΤΑΜΙΤΙΟΥ 554.  
ΑΓΟΡΑΝΑΚΤΟΞ|ΠΑΝΑΜΟΥ 530.  
ΙΟΞΟΙΚΟΥ|ΑΓΡΙΑΝΙΟΥ 729.  
ΑΘΗΝ[Ο]ΔΟΤΟΥ 22. Plate 89 h 4.  
ΑΘΛΕΑΞ (or ΑΕΝΕΑΞ) 155.  
ΑΘΩΟΞ 107. Round. Helios head within.  
ΕΠΙ ΑΘ (?) [ ] 115.  
ΕΠΙ ΑΙΝΗΞΙΔΑΜΟΥ ΑΓΡΙΑΝΙΟΥ 173.  
ΕΠΙ [ΑΙΝΗ]ΞΙΔΑΜΟΥ ΥΑΚΙΝΘΙΟΥ 17.  
ΕΠΙ ΑΙΝΗΞΙΔΑΜΟΥ|ΘΕΞΜΟΦΟΡΙΟΥ 20. Plate 89 h 1.  
ΕΠΙ ΑΛΕΞΙ ΜΑΧΟΥ ΘΕΞΜΟΦΟΡΙΟΥ 504. <sup>1</sup>Μ upside down.  
ΕΠΙ ΑΛΛΙ|ΚΡΑ[ΤΕ]ΥΞ ΠΕΔΑΓΕΙ[Τ]ΝΥΟΥ 79.  
ΑΜΥΝΤΑ 555. Tree, r.  
ΑΜΥ[ΝΤΑ] 170.  
ΕΠΙ ΑΝΔΡΙΑ ΑΡΤΑΜΙΤΙΟΥ 475.  
ΕΠΙ ΑΝΔΡΙΑ ΞΜΙΝΘΙΟΥ 438.  
ΕΠΙ ΑΝΔΡΟ ΝΕΙΚΟΥ ΔΑΛΙΟΥ 158.  
ΕΠΙ ΑΝΔΡΟΝΙ ΚΟΥ ΒΑΔΡΟΜ[ΙΟΥ] 199.  
ΑΝ ΔΡΟΝΙΚΟΞ (?) 86. Lily above.  
ΑΝΤΙΜΑΧΟΥ 563.  
ΑΝ[ ]ΟΥ 176.  
[ ]ΑΡΑΤΟΥ? 171.  
ΕΠΙ ΑΡΑΤΟΦΑΝΕΥΞ ΥΑΚΙΝΘΙΟΥ(?) 188. Round. Lily within.  
ΕΠΙ ΙΕΡΕΩΞ ΑΡΑΤΟΦΑΝΕΥΞ ΠΑΝΑΜΟΥ 585.  
ΑΡΓΗΟ(?)Υ 644. On half of a double handle.  
ΑΡΙΞΤΕΙΔΑ ΔΑΛ[ΙΟΥ] 724. Round. Figure within.  
ΕΠΙ ΑΡΙΞ ΤΕΙΔΑ 620.  
ΕΠΙ ΑΡΙΞΤΕΙΔΑ|Ξ[ΜΙ]Ν[ΘΙ]ΟΥ 487.  
ΕΠΙ[ΑΡΙΞ] ΤΕΙΔΑ ΑΡΤΑΜΙΤΙΟΥ 561.  
ΑΡΙΞΤΙΩΝΟΞ 18, 208.  
ΑΡΙΞΤΙΩΝΟΞ 546.  
ΕΠΙ ΑΡΙΞ ΤΟΔΑΜΟΥ 141.  
ΕΠΙ|ΑΙΑ[ ]ΑΜΟΥ 220. Star, l.  
ΕΠΙ ΑΡΙΞΤΟ ΚΡΑΤΕΥΞ ΠΑΝΑΜΟΥ 189.  
ΕΠΙ ΑΡΙΞΤΟΚΡΑ ΤΕΥΞ ΠΑΝΑΜΟΥ 133.  
ΑΡΙΞΤΟΚΡΑΤΟΥ 57.  
ΑΡΙΞΤΟΚΡΑΤΟΥ 61.  
ΕΠΙ ΑΡΙΞ ΤΟΚΡΑΤΟΥ ΥΑΚΙΝΘΙΟΥ 114.  
ΑΡΙΞΤΟΦΑΝ ΕΥΞ 197.  
ΕΠΙ ΑΡΙΞΤΟ ΦΑΝΕΥΞ ΠΑΝΑΜΟΥ 112.  
ΕΠΙ ΑΡΙΞΤΟ ΣΤΡΑΤΟΥ ΞΜΙΝΘΙΟΥ 599.  
ΑΡΙΞΤΟΥ 143, 575.  
ΕΠΙ ΑΡΜ(?)ΟΞΙΔ(?)Α 533. Helios head, l.  
ΕΠΙ ΑΡΟ(?)[ ]Α(?)ΑΔΙ 31. Helios head, l.  
ΑΦΑΝΟ Α[ ]ΟΙ ? 39. Obscure figure, r.  
[ ]ΑΦΟΔΟ? [ ]ΝΥΟΥ 509.  
ΕΠΙ Α[ ]ΠΟΛ[ΙΟΞ] ΠΑΝΑΜΟΥ 574.  
ΕΠΙ Α[ ]ΑΜΟΥ 220.  
ΕΠΙ Α[ ]ΡΙΔΑ [ ]ΑΡΤΑΜΙΤΙΟΥ 56.  
ΒΡΟΜΙΟΥ 121; 451 (with helios head, r.); 606 (Β[ΡΟ]ΜΙΟΥ).  
ΓΥΜΝΑΣΤΟΥ 30. Palm branch. Head with helmet. Plate 89 h 2.  
ΔΑΜΟΚΡΑΤΕΥΞ 214. Round; 505 round. Lily within; 232 written backwards. Round. Lily within.  
ΔΑΜΟΚΡΑΤΕΥΞ 520. Round.  
ΕΠΙ ΔΑΜΟΚΡΑΤΕΥΞ ΥΑΚΙΝΘΙΟΥ 559.  
ΔΑΜΟΝΙΚΟΥ 628.  
ΕΠΙ ΔΑΜΟΝΙΟΥ ΑΓΡΙΑΝΙΟΥ 656.  
ΔΙΟΚΛΕΙΑΞ(?) 454.  
ΔΙΟΝΥ ΚΙΟC [ ] 657.  
ΔΙΟΥ 95.  
ΔΩΡΟΞ ΘΕΞΜΟΦΟΡΙΟΥ 38.  
ΕΡΜΙΑ 46.  
ΕΠΙ ΕΡΩΝΟΞ 583. A second line, illegible.  
ΕΠΙ ΕΣΤΙΟΥ ΑΓΡΙΑΝΙΟΥ 88.  
ΕΠΙ ΕΥΔΑΙΜΟΦΟΔΟΥ ΠΑΝΑΜΟΥ 299. Round. Lily within.  
ΕΠΙ ΕΥΔΑ ΜΟΥ ΑΓΡΙΑ ΝΙΟΥ 446.  
ΕΠΙ ΕΥΔΑ ΜΟΥ ΠΑΝΑΜΟΥ 643.  
ΕΠΙ ΕΥΔΑΜΟ ΥΑΛΙΟΥ 531.  
ΗΡΑΚΛΕΥΞ 215. Lily below.  
ΕΠΙ ΘΑΡΞΙ ΠΟΛΙΟΞ 664.  
ΕΠΙ ΘΑΡΞΙΠΟΛΙΟΞ ΠΑΝΑΜΟΥ ΔΕΥΤΕΡΟΥ 462.  
ΕΠΙ ΘΑΡΞΙΠΟΛΙΟΞ ΠΕΔΑΓΕΙΤΝΥΟΞ 544.  
ΕΠΙ ΘΑΡΞΙΠΟΛΙΟΞ ΘΕΞΜΟΦΟΡΙΟΥ 662.  
ΕΠΙ ΘΑΓΞ[ΙΠΟΛΙΟΞ] ΑΡΤΑ ΜΙΤΙΟΥ 556.  
ΕΠΙ ΘΑΡΞΙ ΠΟΛΙΟΞ ΔΑΛΙΟΥ 142. Written backwards.



ΕΠΙ ΘΕΟΔΑΜΟΥ ΑΡΤΑΜΙΤΙΟΥ 461. Round. Lily within.

ΕΠΙ ΘΕΟ ΔΩΡΟΥ 91. Part of a figure below.

ΕΠΙ Θ[ΕΟ] Δ[ΩΡΟΥ] 123. Helios head, l.

ΕΠΙ ΘΕΟΔΩΡΟΣ ΑΓΡΙΑΝΙΟΥ 577.

ΕΠΙ[ ]ΘΕΞΜΟΦΟΡ[Ι]ΟΥ 482.

ΕΠΙ Θ[ ]Υ ΘΕΞΜΟΦ[ΟΡΙΟΥ] 551.

ΕΠΙ ΚΑΛΙ ΚΡΑΤΕΥΞ 443. Helios head, l.

ΕΠΙ ΕΡΕΩΞ ΚΑΛΛΙΚΡΑ 213.

ΕΠΙ ΚΑΛΛΙΝ[ΙΚΟΣ] 219. Star in three corners.

ΚΑΡΝΕΙΟΥ ΑΓΡΙΑΝΙΟΥ 218.

ΩΝΟΣ ΚΑΡΝΕΙΟΥ 144. Round. Lily within.

ΕΠΙ ΚΛΕΩΝΥΜΟΥ [ΑΡ]ΤΑΜ[ΙΤΙ]ΟΥ 185.

ΚΡΕΟΝ ΤΟΣ 174.

ΚΡΕΟΝΤΟΣ ΥΑΚΙΝΘΙΟΥ 140.

ΚΡΕΟΝ ΤΟΣ ΒΑΔΡ ΟΜΙΟC(?) 275. Month name very uncertain.

ΑΥΞΙΜΑΧΟΣ 159. Anchor below.

ΜΑΡΞΥΑ ΘΕΞΜΟΦΟΡΙΟΥ 207.

ΔΑΛΙΟΥ ΜΑΡΞΥΑ 553.

ΜΕΝΩΝΟΣ 501. Club (?) below.

ΜΕΝΩΝΟΣ ΒΑΔΡΟΜΙΟΣ 624. Round. Written backwards. Lily within.

ΜΙΔΑ 444. Acorn, r. Caduceus (?) below.

ΜΙΚΥΘΟΥ 217. Round. Branch. Rosette within.

ΜΟ[Γ]ΕΝΟ? 598. Round. Lily within.

ΜΥΤΕΩΝ 499. Helios head, l.

ΝΕΙΛΟΥ ΠΑΝΑΜΟΥ 23.

ΕΠΙ ΝΙΚΑ ΞΑΓΟΡΑ 40. Helios head, l.

ΕΠΙ ΝΙΚΑΞΑΓΟΡΑ 489. Round. Dolphin within.

ΕΠΙ ΝΙΚΑΞΑ ΓΟΡΑ ΠΑΝΑΜΟΥ 156; 698. Written backwards.

ΕΠΙ [ΝΙΚΑ]ΞΑΓ ΟΡΑ ΒΑΔΡΟΜΙΟΥ 186.

ΝΙΚΑΤΙΔΟΣ 545.

ΕΠΙ ΝΙΚΩΝΟΣ 190. Round. Lily within.

ΕΠΙ ΞΕΝΟΦΑΝΕΥΞ ΑΓΡΙΑΝΙΟΥ 210.

ΕΠΙ [Ξ]ΕΝΟΦΑΝΕΥΞ Υ[Α]ΚΙΝΘΙ[Ο]Υ 178.

ΕΠΙ ΖΕΝΟΦΑΝΕΥΞ ΑΡΤΑ(=Α)ΜΙΤΙΟ 453. Round. Lily within. Z for Ξ.

ΞΕΝΟΦΑΝΕΥΞ [ΑΓΡΙΑ]ΝΙΟΥ 191.

ΟΛΥΜΠΙΟΥ 37.

ΕΠΙ ΟΝΑΞΙ ΑΝΔΡΟΥ 445.

ΕΠΙ ΟΝΗΞΙΔΑΜΟΥ ΠΑΝΑΜΟΥ 89. Round. Lily within.

ΕΠΙ [ΟΝ]ΗΞΙ[ΔΑΜΟΥ(?)] 92. Helios head, l.

ΟΝΑΞΙΟΙΚΟΥ 113.

ΠΑΓΥΑΡΕΞ(?) 573.

ΠΑΝΑΜΟΥ 502; 216 round, Lily within; 412 (one or two lines lost); 59 ΠΑΝΑΜΟΥ [ ] ΑΡΙΟΝΙ? Helios head, r; 500 [Π]ΑΝΑΜΟΥ after an illegible line.

ΠΑΡΙΑ 415. On half of a double handle.

ΠΑΞΙΩΝ ΑΓΡΙΑΝΙΟ 452.

ΠΑΥΞΑΝΙΑ 483.

ΕΠΙ ΠΑΥ ΞΑΝΙΑ 233.

ΕΠΙ ΕΡΕΩΞ ΠΑΥΞΑΝΙΑ 488.

ΕΠΙ ΠΑΥΞΑ ΝΙΑ ΥΑΚΙΝΘΙΟΥ 175.

ΕΠΙ [Π]ΑΥΞΑΝΙΑ ΥΑΚΙΝΘΙΟΥ 138. Round. Within, ANKY(?) and sheep's head (?).

ΕΠΙ ΠΑΥΞΑΝΙΑ 485. A second line illegible.

[ ] Π[ΑΥΞΑ]ΝΙΑ 193. Second line; first and third lost.

ΕΠΙ ΠΕΙΞΙ ΣΤΡΑΤΟΥ [Β]ΑΔΡΟΜΙΟΥ 558.

ΕΠΙ ΕΡΕΩΞ ΠΟΛΥΚΡΑΤΟΥ ΜΗΝΟΣ Α[ ] 147. Round. Lily.

ΕΠΙ ΞΩΣΤΡΑΤΟΥ ΔΑΛΙΟΥ 449. Round. Lily within.

ΞΩΤΗΡΙ [ ] ΦΑΙΡΟΥ 450.

ΥΑΚΙΝΘΙΟΥ 209 (third line. Two lines lost).

ΕΠΙ[ ] ΥΑΚΙΝΘΙΟΥ 417.

ΦΑΝΙΑ 486.

ΦΙΛΑΙΝΙΟΥ 506.

ΦΙΛΑΙΝΙΟΥ [ ] Ο(?) ΜΟΥ 55.

ΔΑΛΙΟΥ ΦΙΛΑΙΝΙΟΥ 695. Wreath, l.

ΕΠΙ ΦΙΛΟΔΑΜΟΥ ΑΓ[ΡΙΑ]ΝΙΟΥ 19. Plate 89 h 3.

ΦΙΛΟΚΛΕΑ 274.

ΕΠΙ ΧΟ ΜΟΝΟΣ ΞΕΜΙΝΘΙΟΥ 87. Lily above.

ΧΡΗΣΙΜΟΥ 665. Round. Lily within.

#### d. POTTERS' MARKS.

1. 36, G, Letters ΓΑ incised on flat bottom of a pottery lamp. Page 15, No. 11.

2. 138, G, 1 m. Letter K stamped on jar handle in addition to a circular seal impression. Page 15, No. 12.

3. 195, G, 2.25 m. Obscure character in a circle on jar handle. Page 15, No. 13.

4. 196, F, 5 m. Two letters (EL?) near bottom of large amphora. Page 15, No. 14.

5. 221, I, 4 m. EI in circle on jar handle. Page 15, No. 15.

6. 442, A, 0.8 m. M in circle on bottom of lamp. Page 15, No. 16.

7. 522, F, 2.5 m. Cross mark made after baking on bottom of pottery jar. Page 15, No. 17.

8. 630, F, 4.5 m. Letters ΥΠ on handle of small bottle. Possibly not a potter's mark, but part of a broken stamp. Page 15, No. 18.

9. 33, F, 2 m. Marching soldier? in oval on an amphora handle. Page 13, No. 12.

10. 32, F, 1.75 m. Stamp in an oval on amphora handle. Seems to be ΤΟΕΡ with Ρ reversed. Page 13, No. 11.

#### C. LATIN INSCRIPTIONS

The Latin inscriptions are all on fragments of stone, which, with the exception of the two votive altars (Nos. 30 and 31 below), are bits of inscribed marble tablets. Of the size of these tablets there is no indication.

1. 148, A, 1 m. Fragment (10 x 10 x 5) with the eight letters (4 cm. high) in two lines: ONIS | IICI. Page 16, No. 22.

2. 202, G, 4 m. Fragment (11 x 12 x 2) with four letters (h. 8 cm.), the first apparently I, followed by III. Page 16, No. 23.

3. 537, H, 4.5 m. Fragment (d. 5.5, th. 1.4), rounded as if intended for use as a weight. Three letters, V apparently, S, and T of larger size. Page 16, No. 24.
4. 538, H, 4.5 m. Fragment (6 x 6 x 1.4), rounded like No. 3. Portions of four letters in two lines. Page 16, No. 25.
5. 539, H, 4.5 m. Fragment (10.5 x 7.7 x 1.6). The letters TRIB, abbreviation mark, and portions of three other letters. Page 16, No. 26.
6. 580, G, 4 m. Fragment (15 x 7) with letters VE. Page 16, No. 27.
7. 580a, G, 4 m. Reverse of No. 6 with the letters IC? Page 16, No. 28; Plate 90 g 7.
8. 581, G, 5.5 m. Fragment with letters PASI painted red. A and S seem certain, P and I highly probable. Page 16, No. 29; Plate 90 g 11.
9. 587, near altar, 4 m. Fragment with part of one letter. Page 16, No. 30; Plate 90 g 8.
10. 588, Do., Do. Fragment with letter V, inclining like the IC of No. 7. Page 16, No. 31; Plate 90 g 2.
11. 607, Do., Do. Fragment with AX and abbreviation mark. Page 16, No. 32; Plate 90 g 18 and 19.
12. 608, Do., Do. Fragment with parts of three? letters. Page 16, No. 33; Plate 90 g 14.
13. 609, Do., Do. Fragment with parts of two letters. Page 16, No. 34; Plate 90 g 12.
14. 610, Do., Do. Fragment with part of one letter. Page 16, No. 35; Plate 90 g 10.
15. 611, Do., Do. Fragment with part of one letter. Page 16, No. 36; Plate 90 g 21.
16. 612, Do., Do. Fragment with parts of four letters in two lines. Page 16, No. 37; Plate 90 g 5.
17. 613, Do., Do. Fragment with part of one letter (right leg of A?). Page 16, No. 38; Plate 90 g 15.
18. 614, Do., Do. Fragment with parts of four? letters. Page 16, No. 39; Plate 90 g 20.
19. 615, Do., Do. Fragment with parts of two letters. Page 16, No. 40; Plate 90 g 1.
20. 616, Do., Do. Fragment with parts of two letters. Page 16, No. 41; Plate 90 g 6.
21. 617, Do., Do. Fragment with XII or IIX? Page 16, No. 42; Plate 90 g 4.
22. 618, Do., Do. Fragment with letters C (broken) and A, both painted red. Page 16, No. 43. This fragment joins No. 26, which contains the other half of C. Page 16, Nos. 47 and 43; Plate 90 g 16 and 17.
23. 618a, Do., Do. Other side of No. 22, with letters AN (h. ca. 6 cm.) and parts of two other letters. "Evidently unfinished bit, for lines are drawn to indicate width of letters." Page 16, No. 44.
24. 633, Do., 4.5 m. Fragment of part of V or A. Page 16, No. 45; Plate 90 g 13.
25. 634, Do., 4.5 m. Fragment with part of A? or V? Page 16, No. 46; Plate 90 g 9.
26. 654, Do. Fragment with M? P and half of C, joining No. 22, giving I? M? P. CA. Page 16, No. 47; Plate 90 g 16 and 17.
27. 654a. Other side of No. 26, with portions of three letters of different style. Page 16, No. 48.
28. 655, near altar. Fragment with portion of one letter. Page 16, No. 49; Plate 90 g 3.
29. 667, Do. Fragment with part of one letter. Page 16, No. 50.

Whether the fragments of the foregoing list represent one inscription or several, it is impossible to say definitely; but there are indications that they represent more than one. In the reproductions on page 16 it is evident that the letters on Nos. 28, 31, and 33 slant more than those on the other fragments. Moreover, since 47 and 43, which belong together (Plate 90 g 16, 17), are inscribed also on the back (48, 44), this writing on the back would seem to be a different inscription rather than a continuation of that on the front.

Eight of the fragments (47, 43, 27, 29, 24, 32, 23, 42) seem to belong to one and the same inscription, which, by the aid of similar inscriptions (see H. Dessau, *Inscriptiones Latinae Selectae*, I, p. 68 f.), may be partly restored, as follows: *IMP. CAE. VESPASIANUS AUGVSTUS pont. MAX. TRIB. Pot. VIII imp. XIIx, &c.*

Dr. Schumacher recognized the first three words, also the words *MAX.*, *TRIB.*, and *XII*, as parts of one inscription. Professor Albert A. Howard, of Harvard University, has made several additional contributions to the understanding of the inscription, by pointing out the correct order of the words, by seeing the middle portion of the title *augustus* in the *VST* of fragment 24, by recognizing the significance of the fragmentary *P* after the letters *TRIB.*, and by the conjectural readings of the numerals. If these readings are correct, the inscription belongs to the year 77-78 A.D. See Dessau, *loc. cit.*, No. 253.

30. 198, G, above stairway. Votive altar of limestone with dedicatory inscription. See Plate 59 d;

page 8 for discovery; text to Part III, Fig. 91 for description. The inscription reads:

I <sup>1</sup> . O . M <sup>2</sup>	"To Jupiter Optimus Maximus
M I L . V I X I L <sup>3</sup>	Vexillaries of the
C O H . P <sup>4</sup> . S V P.	Cohorts of Upper Pannonia
C I V E S . S I S C <sup>5</sup>	Citizens of Siscia
I I <sup>6</sup> . V A R C I A N.	Varciani
E T L A T O B I C I.	And Latobici
S A C R V M <sup>7</sup> . F E C E R <sup>8</sup> .	Have dedicated (this object)."

<sup>1</sup>After I and O is a heart-shaped leaf with curved stem. (Fig. 91.) In the other lines the word-separator is a v-shaped

character lying on one side, or a cross. After MIL this character is connected by a curved stem with a leaf.

31. 752. A votive altar similar to No. 30, found at the southeast corner of the great altar, standing on a base in line with two other bases on the north and one on the south. (Plates 18 b; 59 e. For discovery see page 11 above, and for description text to Fig. 90, Page 175.) On the side of the column which faced the east there had been a Latin inscription of some twelve or thirteen lines. Three-fourths of this inscription was obliterated, mainly, no

doubt, by action of the weather. In places the appearance of the surface is such as to raise the suspicion that an older inscription has been defaced to make room for a later. In the last three lines individual letters may be made out with greater or less probability, but the uncertainty is too great to allow even a guess as to the context. On the moldings at the bottom of the column there seem to be faint traces of four other lines of writing.

## II. COINS

The Register records the discovery of one hundred and three coins in 1908. Many of these, owing to the heavy coating of patina or to the action of rust, were illegible. The metal of the coins is said by the Register to be copper in one instance, and bronze in a good many others, but in most cases the metal is not named. Two of the coins are said to be Arabic, three Byzantine, and three Phœnician. Fifty-two coins, varying in diameter from 6 to 16 millimetres, were found together in the debris of the vaulted chamber. They may have once been a small hoard in a purse or wrapped in a cloth. In the following list only those coins are included of which something more may be reported than the place of discovery.

1. 153, A, 0.5 m. Obv., bust r. Rev., large letter M. Illegible inscription on both sides. Looks like a *Follis* of Anastasius, though it might also be one of Justin I or Justinian. Diam. 3.2 (2.9).
2. 540, south of paved platform, in a joint of the Herodian temple wall, 2.4 m. Obv., tripod with urn; in left field, date (year 3); in right field, monogram seemingly composed of letter P on top of letter T; around, BAΞIAEΩΞ HPΩΔOY (Herod the Great, king of Judæa 40-4 B.C.) surrounded by a circle of dots. Rev., a pointed, helmet-shaped head-dress surmounted by a star; on either side a palm branch; on outer edge a circle of dots. Unusually fine specimen. Diam. 1.6 (1.4), th. 2 mm. Cf. Volume II, plate 63, No. 159, and British Museum Catalogue, Palestine, page 220, Nos. 1-10, and plate XXIII, Nos. 14-16.
3. 621, G (cistern), 7.6 m. Coin of the time of the Procurators in Judæa under Tiberius, of type described in British Museum Catalogue, Palestine, page 254, Nos. 31-53, having on obv. TIB | KAI CAP within a wreath, and on rev. a palm branch, IOY AIA, and date. On obv. of our coin the wreath is faintly visible. On rev. the palm branch and IOY AIA are recognizable. Diam. 2.2 (2), th. 2 mm.
4. 635, G (cistern), 8 m. Medallion of Hadrian. Obv., bust of the emperor l., and HAD of the name HADRIANVS AVG. COS. III. P. P. Rev., four children holding the attributes of the four seasons, and traces of TEMPORVM FELICITAS. Diam. ca. 3. See Cohen, Description, II, page 225, No. 1436.
5. 636, G (cistern), 8 m. Sidonian (?) coin. On reverse a galley. Diam. 2.3.
6. 637, G (cistern), 8 m. Obv., bust of Constantius II with diadem r., and traces of FL. IVL. CONSTANTIVS P. F. AVG. Rev., around traces of figures, [FEL. TEMP.] REPARATIO. Diam. 2.3. See Cohen, VII, page 445, No. 30.
7. 649, near altar, in Greek stratum beneath Herodian floor-level, 5 m. Obv., head of Athena r., with crested helmet; parts of four letters. Rev., MIAHTOTOTAIΩ[N] around an owl with double body. Diam. 1.7, th. 0.25. See British Museum Catalogue, Mysia, page 91 and plate XXI, No. 1.
8. 652, H, 4 m. Billon of "Antoninianus" (so-called) of Salonina, queen of Gallienus. Obv., bust of Salonina r., with diadem; and SALONINA AVG. Rev., Gallienus standing r., receiving a victory from the hands of Rome seated holding a lance; and ROMAE AETERNAE. Diam. 2 (1.91), th. 2 mm. See Cohen, V, page 507, No. 103.
9. 660, near altar, above Herodian floor-level. Obv., standing male figure holding an object in extended right hand. Rev., head r., apparently of a female. Diam. 1.4. The coin resembles one with the word ΞEBAΞTOΞ published by Dörpfeld in Troja und Ilion, page 485, plate 62, No. 38.
10. 670, F (cistern), 8.8 m. Obv., head of Zeus r., with diadem. Rev., eagle with open wings, and [ΠΤΟΑΕ] ΜΑΙΟΥ [BAΞIAEΩΞ]. (= Ptolemy II.) Diam. 2.6, th. 0.4. See British Museum Catalogue, Ptolemaic Kings, page 25, Nos. 14-19, and plate IV, Nos. 3, 4.

\*Lines 1-3 are to be read: Jovi Optimo Maximo milites vixillarii cohortium Pannoniae Superioris.

\*With vixillarii compare vexillatio, Plate 59 f.

\*The abbreviation for Pannonia is a P with a small A, of which the foot of P forms the left leg. The province of Pannonia, bounded on the north and east by the Danube, was divided into Upper and Lower by Hadrian (117-138 A.D.). The dedication of this altar was therefore not earlier than 117. Siscia

was a town; the Varciani and the Latobici, tribes of Upper Pannonia.

\*In the C the letter I.

\*Possibly we should read ET. Cf. ET in next line.

\*The R in sacrum seems to have been omitted in the writing and added subsequently. See Plate 59 d.

\*Fecer for fecerunt.

11. 678, A, 4 m. Bust of Constantine the Great r., with diadem; around, CONSTANTINVS MAX AVG. Rev., two soldiers standing, each holding a spear with one hand, the other hand resting on a shield; between them two standards; GLORIA EXERCITVS; in ex. SMANT. Diam. 1.85, th. 1 mm. Cohen, VII, page 257, No. 244.
12. 730, G, 1 m. Coin of Aescalon? Obv., head of Tyche. Rev., eagle. Diam. 1.3, th. 2 mm.
13. 740, vault, 5.4 m. Bust of Philip Sr. r., with laurel wreath; IMP. M. IVL. PHILIPPVS AVG. Rev., Victory marching l., holding crown and palm branch; [VICT]ORIA AVG. In field l. S, r. C. (=Senatus consulto). Diam. 2.8, th. 3 mm. Coin of Marcus Julius Philippus. Cohen, V, page 117, No. 232.
14. 741, vault, 5.4 m. Obv., bust of Elagabalus r.; IMP. CAES. M. AV. ANTONINVS AVG. Rev., Astarte standing l., with left foot on trophy, crowned by Nike, who stands on a column l.; SEPTIM. T. VRO. In ex. COLO. Diam. ca. 2.8. British Museum Catalogue, Phoenicia, page 273, Nos. 388-392.

## III. POTTERY

## A. BOTTLES.

1. 16, E, 5 m. Bottle (7.5, top d. 1.8, middle d. 4.5, bottom d. 1.5). Reddish pottery. Top and bottom lost. Page 13, No. 1.
2. 63, E, "under debris of Greek wall."<sup>1</sup> Bottle (9.5 x 5.5). Hard, red pottery, thick ware, red slip. Neck and foot lost. Page 13, No. 2.
3. 101, G, 2 m. Bottle (7.5, middle d. 4.3). Reddish clay, hard, thick, coarse ware, unglazed. Neck broken. Page 13, No. 3.
4. 476, G, 4 m. Bottle (13.8 x 4.8). Foot and part of neck lost. Light red pottery, primitive ware, outside ribbed, red paint. Page 13, No. 5.
5. 111, G, 2 m. Bottle (10, d. 2.7 top and bottom, ca. 7 middle). Coarse, red, heavy pottery, two handles, foot flat and small. Page 13, No. 4.

## B. CUPS.

1. 85, A, 2.5 m. Roman cup (h. ca. 4.8, top d. ca. 9, bottom d. 4.6). Large fragment, top broken. Terra sigillata, bright red, thin, hard ware, incised ornaments. Polished exterior.
2. 98, G, 2 m. Fragment of cup (h. 4, d. 15.5). Gray, hard, homogeneous pottery, gray glaze.
3. 103, G, 0.5 m. Fragment of cup with two handles (7.5 x 4.8). Thin, fine, Greek ware, black glaze.
4. 494, G, 2.5 m. Fragment (8 x 4), including upper rim. Fine, brown, Greek ware, with leaf ornamentation in relief. Page 14, No. 20.
5. 679, F (cistern), 9 m. Arabic cup (12 x 12). Hard, thin pottery, ribbed, one handle. Coarse, rough exterior. Thick at bottom. Plate 89 d 2.
6. 744, G (cistern), 5 m. Arabic cup (h. 10, d. 11). Gray ware, hard, ribbed, one handle. Plate 89 e 1.
7. 711, F (cistern), 11 m. Cup or lamp. Fragment (7 x 6 x 6). Hard, gray ware, red slip, hand-finished.

## C. DISHES.

1. 64, E (under debris of Greek wall). Dish (h. 5.3, d. 12.2, th. 0.33), one half. Hard, thin, red, Greek pottery, hollow foot. Red slip.
2. 99, A, 1 m. Fragment (12 x 8) of bottom of

Arabic dish. Red ware, yellow and green glaze, brown stripes on interior. Page 14, No. 9.

3. 492, F, 2.5 m. Bottom (5 cm.) of Greek vessel (dish?). Red pottery, black glaze. Rosette stamped in middle of interior. Page 13, No. 28.
4. 110, G, 0.5 m. Part of bottom of flat dish (9 x 6, th. 0.6). Bright red terra sigillata. In centre of interior, small stamp with letters AOC. Page 14, No. 30.
5. 149, E, 4.5 m. Greek dish (h. 2.5, d. 17, d. of foot 11.7), ca. one-sixth lost. Fine, red pottery, black glaze. In interior, striated pattern. Page 14, No. 31; Plate 89 f 6.
6. 166, E, 3 m. Dish (upper d. 18, d. of foot 7.5, h. 6.5, th. 0.9 and 1.3). Gray-red, coarse ware, ribbed horizontally. Brick-red slip in interior, brick-red paint with splotches on exterior. Page 14, No. 33.
7. 167, E, 3 m. Dish fragment (h. 5.5, d. ca. 20) similar to No. 6. Plate 89 f 32.
8. 168, E, 3 m. Dish (h. 8.3, upper d. 19.5, foot 6.9). Homogeneous, yellowish, hard ware, red slip in interior, exterior of upper rim painted brick-red.
9. 169, G, 2.5 m. Dish (h. 4.5, upper d. 13, th. 0.45). Hard, fine red pottery, outside dull and coarsely painted, grayish glaze inside.
10. 179, A, 1.6 m. Dish fragment (h. 3.5, bottom d. 9?). Coarse, primitive work, gray pottery painted red on both sides.
11. 183, A, 1 m. Dish fragment (h. 3.2, d. ca. 22). Red, hard pottery, incised perpendicular lines on exterior. Page 14, No. 15.
12. 439, I, 1.8 m. Dish fragment (9 x 8). On bottom of interior a rosette in white and brown paint surrounded by white dots. Page 14, No. 27; Plate 89 f 23.
13. 261, G, 3 m. Fragment (10.5 x 6) of bottom of Greek vessel (dish or plate). Hard, fine red pottery, black glaze. Stamped ornaments. Page 14, No. 18; Plate 89 f 17.
14. 262, G, 4 m. Fragment (diameter of foot 8) of bottom of Greek vessel, with incised ornaments and four small stamp impressions. Page 14, No. 32; Plate 89 f 18.
15. 510, I, 2 m. Dish fragment (10 x 7). Terra sigillata, with obscure stamp. Page 13, No. 29.
16. 516, I, 2 m. Dish fragment (11.5 x 4). Fine

<sup>1</sup>"Greek Wall" is Dr. Schumacher's name for a wall running N. and S. along the western edge of the first terrace west of the summit.

Greek ware, black glaze, ivy designs in white paint. Page 14, No. 34; Plate 89 f 30.

17. 548, G, 3 m. Dish fragment (4 x 2). Hard, gray ware with remains of paint, red-brown and cobalt blue. Hand-made?
18. 557, F. Dish fragment (h. 6.5, d. 16.5). Hard, red pottery, red slip. Late Israelite. Page 13, No. 25.
19. 567, F, 3.8 m. Dish fragment (10 x 7; d. of foot 13). Flat. Fine, yellowish ware, red slip, seal in circle.

#### D. FIGURINES.

1. 161, G, 2 m. Female head (3.5 x 2.5) wrapped in a scarf. Pink pottery, fine ware and work. Fragment of a statuette. Page 15, No. 8; Plate 89 f 4.
2. 523, G, 3 m. Female figure (8 x 4.5), fat, seated, holding a vase. Roman? Hollow, feet lost, small hole in head. Gray ware, well burnt. Page 15, No. 10.
3. 126, G (western end), 3 m. Crude head of horse (8 x 7). Greek. Page 15, No. 6; Plate 89 f 24.
4. 224, G (vault), 5 m. Head and elongated neck of horse (l. 10). Red-brown, hard pottery, black slip. Eyes and bridle painted white. Pot handle. Page 15, No. 7; Plate 89 f 14.
5. 263, A, 0.5 m. Head of animal (l. 3.5), broken. Red pottery. Plate 89 f 20.
6. 225, A, 5.5 m. Torso of quadruped (l. 9), head and legs lost. Gray pottery, red paintings to indicate harness or trappings. Page 15, No. 9.

#### E. JARS.

1. 541, F, 2.5 m. Jar (4.5 x 5, d. of foot 2.8). Yellowish, fine ware. Foot flat, but slightly askew. Page 13, No. 7.
2. 719, F (cistern), 11 m. Arabic jar (42.5 x 25). Pointed bottom, two handles, sides flattened, horizontal ribs, blisters on exterior. Yellowish, hard pottery, badly burnt. Page 13, No. 9.
3. 722, G (cistern), 6 m. Jar of same ware and shape as No. 2.

#### F. HANDLES.

1. 25, E (eastern end). Piece of jar handle (6 x 3 x 1.2). Ribbed lengthwise. Red pottery. Page 13, No. 10.
2. 76, E (slope), 0.7 m. Jar handle (5.5 x 4.2 x d. 1.4). Yellow, hard, fine pottery, black glaze. Red slip in interior. Page 13, No. 13.
3. 96, G, 1.5 m. Fragment of jar handle (2.2 wide). Part of stamp showing bird or tail of animal?
4. 135, G, 2 m. Jar handle (8.5 x d. 2) of rope-twist form, fine, hard, yellow ware. Three red-brown bands at union with jar. Page 13, No. 15; Plate 89 f 5.
5. 223, G, 2 m. Jar handle (d. 2.7) in shape of ear, hollow, with effaced stamp. Page 13, No. 18; Plate 89 f 15.

6. 690, F (cistern), 9.3 m. Jar handle fragment (9 x 3) representing head of animal? Coarse, red pottery mixed with small white stones. Page 13, No. 20.
7. 699, F, 8 m. Fragment (20 x 12) of a large jar with at least three handles. Hard, black ware, coarse exterior, hand-finish. Page 13, No. 21.
8. 630, F, 4.5 m. Broken handle (1.6 x ?) of small bottle. Yellow-gray, fine Greek ware, drab slip. Seal impression or potter's mark: YΠ. Page 15, No. 18.
9. 713, F (cistern), 11 m. Handle and neck of Greek bottle (h. 11.5). Fine, brown ware, glazed. Plate 89 d 6.
10. 77, E (on slope west of Greek wall), 0.4 m. Handle (8 x 7 to 10; 1.5 average thickness) of sacrificial? dish. Coarse, gray ware mixed with white stones. Lower surface flat. On upper surface in relief human head with helmet or cap. Page 13, No. 14.
11. 203, G, 4 m. Handle (12 x 4.5) of pan. Hard, red pottery, primitive make. Page 13, No. 17; Plate 89 f 13.
12. 264, G, 4 m. Pot handle fragment (5 cm.), decorated. Red-yellow pottery. Page 13, No. 19; Plate 89 f 19.  
For No. 16 of page 13 see IV, Stone Objects, No. 4.

#### G. JAR FRAGMENTS.

1. 41, F, 2.5 m. Neck of large jar, of thick hard, reddish pottery. Stamp nearly illegible (3.3 x 1.7), probably a potter's mark. Reading may be OMTT. Page 13, No. 6.
2. 563, G, 4.2 m. Upper part (h. 8.5, d. of mouth 4.3) of jar, exterior burnt yellow and red over open flame, interior burnt gray. Coarse pottery mixed with white stones. Late Israelite. Page 13, No. 8; Plate 89 d 4, f 22.
3. 629, F, 4.5 m. Amphora neck (11 x 14). Hard, yellowish ware with Greek graffiti scratched after the burning. Page 13, No. 32.
4. 673, G, 3 m. Neck (12 cm. wide) of amphora, with Greek name [IT]ITOKPATETYC painted with brush bright red. Hard ware mixed with small stones. Page 14, No. 3.
5. 196, F, 0.5 m. Bottom (d. 7) of large amphora. Hard, red, coarse pottery. Two incised letters. Potter's mark? Page 15, No. 14.
6. 522, F, 2.5 m. Fragment (7 x 6) of bottom of jar. Hard, gray ware, uneven surface, yellow slip. Cross mark made after burning. Page 15, No. 17; Plate 89 f 29.
7. 34, F, 2 m. Fragment (l. 10, w. 7 to 3.5 x 1 thick) of fine Greek amphora. Fine, hard, gray ware, drab slip. Head of bird painted in sepia (s) and sienna (s') on outside; black varnish inside. Page 14, No. 6.
8. 44, E (under Greek wall). Fragment (8 x 9 tapering to 1, 1.5 thick) of jar. Coarse, gray, not homogeneous clay mixed with bits of basalt and sand. Red slip on both sides. Circular indentations on upper part. Page 14, No. 5.
9. 69, E (under Greek wall). Fragment (4.7 x 2.8

x 0.6) of small jar. Pottery, cobalt blue. Fine, homogeneous, blue ware throughout.

10. 547, F, 2.5 m. Fragment (8 x 7.5 x 0.8) of old Jewish jar. Hard, black ware, red slip interior and exterior. Two black (dark-brown) painted bands. Page 13, No. 24.
11. 562, F, 3.5 m. Fragment (12 x 8) of jar. Ribbed interior and exterior, hard, red pottery, one handle. The first four letters of a name beginning ΑΠΟΑ, scratched in the burnt clay. Page 14, No. 2.
12. 631, F, 5.3 m. Fragment (8 x 6.5) of hard, whitish pottery, with five Greek letters and part of a sixth painted brown: ΑΟΥΨΟΗ ? Page 14, No. 1.

#### H. JUGS, PITCHERS, PLATES, AND POTS.

1. 150, A, 1 m. Arabic jug (h. 11, d. 9, d. of mouth 2.6), ribbed, one handle, flat bottom. Hard, black, coarse pottery. Plate 89 d 5.
2. 718, F (cistern), 11 m. Pitcher (h. 18, d. 15.5, of foot 7.8, of lip 8.8). Good, reddish ware, drab slip, one handle, hollow foot. Plate 89 d 3.
3. 712, G (cistern), 5.5 m. Pitcher (21 x 17). Good, reddish ware, one handle, drab slip. Plate 89 d 1.
4. 124, G, 1 m. Fragment (6 x 2.7) of plate. Terra sigillata, bright red. Four concentric circles. Three small seal impressions (crabs ?). Page 15, No. 1.
5. 125, I, 3.5 m. Fragment (12 x 8) of large plate. Terra sigillata. Stamp in interior surrounded by circle. Page 15, No. 2.
6. 134, G, 2 m. Fragment (10 x 7.6) of plate. Terra sigillata. On bottom three concentric circles, d. of innermost 10.2 m. Therein in two lines incised inscription in Greek: ΔΙΟΜΗC ΜΑΡΙΑC. Page 13, No. 30; Plate 89 f 3.
7. 568, F, 3.8 m. Fragment (7 x 3, d. of foot 7) of bottom of plate or dish. Good ware, black glaze. On interior a stamp impression.
8. 60, E (in joints of Greek wall). Fragment (8 x 5) of Greek pot or bowl, upper part. Fine, hard ware, black slip on exterior, interior painted red-brown.
9. 90, G, 0.5 m. Fragment of bottom of vessel (pot or bowl ?). Terra sigillata. Fine, thin, polished ware. Square stamp with raised letters in a circle on bottom of interior: ΧΕΥC. Page 13, No. 27.
10. 491, F, 2.5 m. Fragment (9 x 6) of pot. Hard, gray ware, coarsely burnt. Interior painted red and decorated with numerous punctures made with a triangular point. Page 14, No. 10; Plate 89 f 25.
11. 105, G, 2 m. Top part (h. 2.8, l. 3) of small pot or bowl (d. ca. 4). Black glazed ware, very thick walls.
12. 184, A, 1.5 m. Fragment (11 x 9) of pot, of hard, red-gray ware, thick walls, incised ornamentation. Probably Byzantine. Page 14, No. 16.
13. 572, F, 3.8 m. Fragment (10 x 7, d. of flat foot 6) of pot or bowl. Coarse, thick, gray ware, rough exterior (stones in the clay). Red slip.

Graffiti on exterior made before slip was put on. Page 13, No. 31.

#### I. BOWLS.

1. 35, F, 2 m. Fragment (8 x 4.5 x 0.6) of upper part of bowl. Hard, fine, red terra sigillata ware, with brick-red slip. Edge decorated with raised egg and dart ornament. Page 14, No. 11.
2. 45, F, 2.5 m. Fragment (9 x 5 to 1 x 0.4) of Greek pottery. Fine, hard, thin terra sigillata. Brick-red slip on exterior and interior, lustrous and brighter on exterior. Raised molding of egg and dart pattern. Dancing figures between rosettes. Page 14, No. 12.
3. 74, E, 0.5 m. Fragment (4 x 3.3 x 0.55) of bowl of classical Greek type, dark, red, hard pottery, black slip. Columns and architrave with meander pattern. Page 14, No. 23.
4. 75, E, 0.5 m. Fragment (3.3 x 2.5 x 0.55) from same bowl as No. 3. Page 14, No. 24.
5. 78a, E (slope), 0.4 m. Fragment (10 x 6 x 9.25) of small vessel. Hard, fine, thin, red ware, red slip. In relief, acanthus leaf and rosette ornamentation. Page 14, No. 21.
6. 78b, E (below surface). Fragment (2.5 x ca. 1) of bowl with bands and figures.
7. 97, G, 1 m. Fragment (h. 4, d. 9.2) of lower part of Greek vessel, top and bottom broken. Perpendicularly ribbed on exterior. Fine, red ware, black glaze. Page 14, No. 14.
8. 566, F, 3.8 m. Fragment (6 x 5) of Greek bowl ? Fine, very thin, ochre-colored ware. Black slip on interior, bright red slip on exterior. Raised acanthus leaf decoration as in No. 5. Plate 89 f 2.
9. 100, A, 1 m. Fragment (8 x 5.5 x 0.9) of Arabic pottery (bowl ?). Yellowish gray, coarse ware. Stripes and lines painted dark brown. Page 14, No. 25.
10. 108, G, 2 m. Lower part (8 x 6.5 x 0.4) of Greek bowl. Hard, thin, reddish brown pottery, black glaze. Ornamented in relief with rosette and border of bosses at centre, alternating long leaves and rows of bosses on sides. Page 14, No. 17.
11. 116, (found in dump). Fragment (9 x 9 x 0.6) of Greek bowl or plate. Brown glaze, sepia paint. Human hand on exterior, ivy spray on interior. Page 14, No. 26.
12. 128, E (slope). Fragment (h. 10, d. ca. 15) of Greek bowl. Dark brown, in parts black glaze. Acanthus leaf and other decoration in relief. Page 14, No. 22.
13. 231, G (vault). Fragment (6.8 x 4.5) of bowl. Fine terra sigillata, red slip, raised ornaments. Page 14, No. 19.
14. 276, H, 2 m. Fragment (10 x 4) of upper part of large bowl. Greek ware, black glaze, egg and dart ornamentation. Page 14, No. 13; Plate 89 f 21.
15. 605, G (cistern), 7 m. Greek cantharus (h. 15, d. 11.5, foot 7.3), put together from ten fragments. Fine, red, polished ware. Page 14, No. 29; Plate 89 c 2.
16. 739, F, 6.83 m. Fragment (5.7 x 4.2 x 0.5) of

Egyptian? pottery. Red ware, red polished slip. Portions of two human heads painted in fine, black lines, eyes white, hair curled. Page 14, No. 28.

#### J. WEIGHTS AND WHORLS.

1. 15, E, 1 m. Weaver's weight (h. 7.5, base 5.3 x 4.8, top 3.3 x 2.4). Reddish gray pottery. Irregular truncated pyramid, perforated near the middle. Page 15, No. 3.
2. 24, E (eastern end). Do. (h. 9, base 5 x 4.7, top 1.6 x 1.1). Yellowish pottery, pyramid form, perforated near top.
3. 511, G, 2 m. Do. (h. 7.3, base 4.5 sq., top 1.7 sq.). Fine, red ware, pyramid form, perforated near top. On top, stamp (female bearing offerings?). Page 15, No. 4.
4. 600, F, 4.5 m. Do. (h. 3.3, d. 6). Circular. Gray pottery, coarse work, large hole. Page 15, No. 5.
5. 14, E, 1 m. Whorl used in twisting thread (h. 2.1, d. 3.1). Gray pottery, stained by fire.
6. 418, A, 0.6 m. Whorl, nearly hemispherical (h. 1.5, d. of bottom 2.3). Gray pottery.
7. 552, A, 1.2 m. Whorl of lentil shape (h. 1.2, d. 3). Black clay.

#### K. OTHER FRAGMENTS.

1. 192, G, 2 m. Fragment of Egyptian glazed pottery. Page 13, No. 22.
2. 592, F, 4.5 m. Fragment of Mycenæan pottery (3.5 x 3 x 0.35). Fine, gray ware, yellow slip. Painted with red and brown lines. Page 13, No. 23.

3. 43, E (eastern end). Fragment of Greek or Mycenæan pottery (7 x 5 x 1.1). Coarse, gray clay mixed with white stones. Yellowish slip. Interior red. Finger impressions on raised upper part of vessel. Page 14, No. 4.
4. 627, F, 4.6 m. Two fragments of very old Israelite pottery (12 x 7 and 10 x 6). Primitive gray ware, red slip, back painted red.
5. 700, F, 8 m. Fragment (9 x 5 x 1.2) of old, thick pottery with three finger-tip impressions. Hard, black clay, coarse ware, hand-finish, red slip. Israelite.
6. 597 (near altar), 4.5 m. Fragment of green pottery (4 x 3 x 1.2). Both sides glazed green. Roman faience.
7. 672, F, 6.8 m. Fragment (d. 4.3, th. 1) of circular base for a statuette. Red pottery. Page 14, No. 8.
8. 54, E, under Greek wall. Circular terra cotta stamp (d. 8, th. 1.6) with raised figures. Red-yellow, hard ware. Hand-made. Page 13, No. 26.
9. 106, A, 0.5 m. Fragment (20 x 11 x 8) of gutter found with a great mass of roof tiles. Thickness 12 to 16 mm. Hard, thick, reddish ware. Interior filled with mortar.

#### L. LAMPS.

Two hundred and seventy-seven pottery lamps were found in 1908. An account of them could add nothing material to the very full description of objects of this class with numerous illustrations drawn from the discoveries of the two following years. See Part IV, Chapter V. On Plate 89 g may be seen samples of those found in 1908.

#### IV. STONE OBJECTS

1. 198, G (above great stairway), 4 m. Roman votive altar dedicated to Jupiter. Hard limestone. See page 8 for discovery; Inscriptions, Latin, No. 30 for text and translation; Part III, explanation of Fig. 91 for description. Plate 59 d.
2. 752, G (beside large altar). Roman votive altar similar to No. 1, with Latin inscription, badly weathered. Limestone. See page 11 for discovery; Inscriptions, Latin, No. 31; Part III, explanation of Fig. 90 for description. Plate 59 e.
3. 594, H (cistern or cave). Stone brazier? (h. 37, d. of foot 14.5). Oval top hollowed out roughly and blackened by fire. Page 15, No. 23.
4. 139, A, 2 m. Fragment of marble bowl with handles. Outside wrought with toothed chisel. D. of bowl ca. 20 cm. Page 13, No. 16.
5. 12, E, 0.5 m. Ca. half of support for ointment jar (d. 7.5, h. 2 cm.). Gray limestone. Page 15, No. 24.
6. 163, A, 1 m. Fragment of support for ointment jar (?), with incised decoration (10 x 4 x 3). Fine gray limestone. Page 15, No. 25.
7. 648, G, 0.5 m. Fragment of pedestal for small jar or small altar (h. 8, d. 7.2 and 6.1). Originally four legs. Soft white limestone. Page 14, No. 7.
8. 668, F, 6.8 m. Mold for casting metal. Hard black limestone. Fragment (4.9 x 1.6 x 0.9). Page 15, No. 35.
9. 94, G, 0.5 m. Upper part of large limestone mortar or jar (16.6 x 9.5 x 3). Trapezoidal in shape, engraved leaf ornaments. Page 15, No. 26.
10. 307, A, 0.5 m. Fragment of marble mortar or jar (17 x 16), with pestle. Page 15, No. 28.
11. 277, E (slope). Fragment of ointment jar (?), decorated with holes symmetrically arranged (h. 3 cm.). Hard gray limestone. Page 15, No. 27.
12. 81, G, 1.5 m. Pestle (h. 5, d. 4.8). Hard white limestone, smooth bottom, four small holes. Page 15, No. 29.
13. 745, G (cistern), 5 m. Triangular rubbing stone for smoothing walls, etc. (7 x 6.5 x 5). Sandstone.
14. 210a, G, ca. 4.5 m. Statue (Augustus?), of white marble. See page 9 for discovery; see also page 176 for further description. Plates 86 h 1; 79 f e.
15. 582, G (near No. 14). Fragment of white marble hand (12 x 10.5). May belong to 14. Plate 86 c 2.
16. 731, south edge of summit plateau, 2.3 m.



- Fragment of human head in marble (26 x 16.5). Eyes and part of forehead preserved. See page 9 for discovery. Plate 86 e 1.
17. 58, F, 0.5 m. Man's head of hard gray limestone (5.5 x 4). Moustache, curled hair around the head, ear-rings. Face badly weathered. Page 15, No. 30.
  18. 481, A, 1.5 m. Head of marble (13 x 10). Probably Jupiter. Nose broken. Page 15, No. 31.
  19. 521, F, 2.5 m. Fragment of leg of white marble (10 x 6). Fine workmanship. Page 15, No. 32.
  20. 595, near altar, 4.5 m. Fragment (13 x ca. 12) of hard white stone, with incised concentric circles, and straight lines, filled with red paint, radiating from the centre. Resembles a sun dial. Page 15, No. 34.
  21. 686, E, 8 m. Large fragment of alabaster vase, finely burnished (13 x 6 x 2.8 to 3).
  22. 632, G (cistern north of vault), 7.9 m. Piece of unworked alabaster (16 x 9 x 6).
  23. 83, A (slope). Weight of hard black limestone (4.3, d. 2.2). Olive-shaped, perforated near one end. Page 15, No. 36.
  24. 201, G (slope), 1 m. Weight, disc-shaped (d. 5 x 5.5, th. 1 to 1.5).
  25. 579, G (near altar), 4 m. Weight (4 x 3 x 2.4). Hard sandstone. Egg-shaped.
  26. 73, G, 2.3 m. Whetstone (10.5 x 1.7 to 3 x 1.7 thick). Hard white limestone. One side smooth, flattened.
  27. 589, F, 4 m. Cylindrical red stone (5.8 x d. 3.8). Sharpener for blades? Small hole in one end and two in other end. Page 15, No. 33.
  28. 706, E, 9 m. Broken amulet (ca. 1 x 1). Cylinder of gray marble. Page 15, No. 38.
  29. 13, E, 1 m. Whorl, nearly hemispherical (d. 2.5, h. 1). Hole through middle. Soft, dark, gray stone (slate?). Page 15, No. 37.
  30. 47, G, 1 m. Whorl similar to 29 (d. 2.7, h. 1.7). Soft green-gray stone.
  31. 602, E (cistern), 7 m. Whorl similar to 29. Hard gray limestone.
  32. 569, F, 3.8 m. Wrought stone object of uncertain use (6 x 4 x 2.2). Several cuts made by saw, and holes made by boring tool. Page 15, No. 39.
  33. 164, G, 2.5 m. Agate bead (1.1 x 1), oval, broken into three pieces.
  34. 181, I, 4 m. Two agate beads (d. of a 1.6, of b 1), red, highly polished.
- For inscribed stones see above under I C, Inscriptions, Latin.

## V. METAL OBJECTS

## A. BRONZE

## a. ARROW TIPS.

1. 122, H, 1.2 m. Tip intact, with two barbs and solid shaft (7 x 1.7). Plate 90 d 9.
2. 420, G (vault), 0.6 m. Tip tapering toward each end (3.3 x 1). Plate 90 d 6.
3. 524, F, 2.5 m. Tip triangular in section (l. 4.2). Hollow shaft. Plate 90 d 11.
4. 542, F, 2.5 m. Tip injured, with two barbs (5 x 2). Hole for end of arrow. Page 16, No. 6.

## b. BRACELETS AND RINGS.

1. 346, A (in Arabic debris). Bracelet (d. 7.5, d. of wire 0.4). Spoon-shaped ends fasten by overlapping. Page 16, No. 1; Plate 90 d 16.
2. 543, A (in Arabic debris), 1 m. Bracelet (d. 8, d. of wire 0.2-0.3). Well preserved. Page 16, No. 2.
3. 472, A (in Arabic debris). Bracelet or ring (d. 3.6). Plate 90 d 12.

## c. INSTRUMENTS AND UTENSILS.

1. 206, A (surface debris), 0.5 m. Bell (h. 2.5, d. 2). Indented in two places. Page 16, No. 8; Plate 90 d 10.
2. 265, G (NE corner of stairway). Fragment of flat blade (l. 2.9, th. 0.9-0.1). Plate 90 d 7.
3. 421, I (slope of summit). Dish (d. 5.1, h. 1.3), with fine patterns, two handles. Page 16, No. 11; Plate 90 d 8.
4. 751, H, 2 m. Oval, concave dish? or shield (d. 5.4 x 3.2, th. 0.1). Page 16, No. 14.
5. 623, F, 4.5 m. Curved part of buckle or

- brooch (width 4 cm.), broken. Page 16, No. 4. With it was found a small broken pin.
6. 669, F, 6.8. Fragment of brooch (l. 4.3). Page 16, No. 5.
7. 137, A, 0.6 m. Part of needle or other sharp instrument (l. 11, d. 0.6). Plate 90 d 13.
8. 154, A, 0.5 m. Pigment stick (l. 9.3 x d. 0.3). Plate 90 d 1.
9. 514, G, 2 m. Pigment stick (l. 16.2 x d. 0.3). Page 16, No. 3; Plate 90 d 2.
10. 503, F, 1.5 m. Ring or hook (d. 3). Hinge for door? Plate 90 d 18.
11. 691, F (cistern), 9.3 m. Half of thin disc with cogs or teeth of saw (d. 4, th. 0.01). Page 16, No. 12.
12. 440, A, 0.6 m. Dish (d. 4.7, th. 0.01), with three equidistant holes near edge. Part of scales for weighing? Page 16, No. 9; Plate 90 d 17.
13. 229, A, 2 m. Seal with concentric circles (d. 2.1). Page 16, No. 10.
14. 674, F (cistern), 9 m. Spoon with long handle (l. 13). Page 16, No. 7.
15. 473, A (in Arabic debris). Pigment instrument, spoon at one end, knob at other (16 x 1.2). Plate 90 d 4.
16. 300, A, 0.5 m. Similar spoon, handle lost (l. 7.2, breadth 1.2). Plate 90 d 5.
17. 671, G, 1.5 m. Tablet (7 x 4.5 x 0.3) with traces of decoration. A weight? Page 16, No. 15.
18. 707, E, 9 m. Two small hat-shaped objects (d. 0.8). Page 16, No. 13.
19. 696, F (cistern), 9.5 m. Strip curved at one end (2 x 2 x 0.01).



## B. IRON

1. 448, A (in Arabic debris). Part of instrument, probably knife, broken, very rusty (15 x 1.4). Plate 90 d 3.
2. 280, F, 1.5 m. Nail (l. 10) with bronze ring (d. 3.3) through head. Plate 90 d 19.
3. 27, E (eastern end). Plough (15.6 x 4), very rusty, point broken.
4. 11, E (surface layer). Spear point (6.5 x 2).
5. 688, H (above east wall of Herodian temple), 4 m. Portion of sword blade with rivets for hilt (22.5 x 6.5 to 5, th. 4 to 0.08). Very rusty.
6. 493, A, 1 m. Pointed instrument or tool (l. 14). Plate 90 d 14 and 15.

## C. LEAD

1. 5, A, 1 m. Irregular ring, "apparently formed by stamping out a disc in an irregular plate" (2.8 x 2.3 x 0.5).
2. 93, G, 1.5 m. A weight? (5.2 x 2.2 x 1.8), roughly cylindrical, upper part broken. Weighs 105 grammes.
3. 550, S. of platform. Weight (6 x 5.5 x 1.1) of irregular shape, each side with remains of letters or carvings. Page 16, No. 16.
4. 726, G, 3 m. Weight with pointed ends (4 x 1.6). Page 16, No. 17.
5. 659, H, 4 m. Oval-shaped disc (3.7 x 3.2 x 0.01). A weight?

## D. GOLD

1. 658, F, 6.8 m. Bit of gold-leaf, very small (0.8).
2. 694, F, 6.8 m. Do. (2.5). Found with No. 1.

## VI. GLASS AND PASTE

## A. GLASS OBJECTS

1. 647, F, 5.3 m. Amulet of black glass, shape of human bust, perforated (h. 1.4). Page 15, No. 21.
2. 182b, I, 4.5 m. Bead, lentil-shaped (d. 0.9).
3. 525, F, 2 m. Do. (d. 0.9).
4. 228b, G (slope). Bead (d. 0.9).
5. 653, H, 4 m. Bead or amulet (d. 1.2), hemispherical, perforated.
6. 340, A (in debris with Arabic pottery), 0.6 m. Bottle or jar (h. 7, max. d. 6). Fine, thin, green glass. Top part broken. Plate 90 a 4.
7. 341, A (in debris with Arabic pottery), 0.6 m. Bottle (max. d. 8). Thin, green glass. Top part broken. Plate 90 a 8.
8. 463, A (in Arabic debris). Bottle (h. 10 x d. 6). Thin, green glass, hollow bottom, top part broken. Plate 90 a 7.
9. 342, A (in Arabic debris). Bottle (h. 6.2, bottom d. 2.3). Green glass, long, slender neck, top broken. Plate 90 a 3.
10. 343, A (in Arabic debris). Bottle (ca. 10 x 8). Thin, transparent glass, long neck, top broken. Plate 90 a 6.
11. 344, A (in Arabic debris). Bottle (max. d. 7.5) of thin, transparent glass, similar to No. 10.
12. 345, A (in Arabic debris). Bottle (max. d. 6) similar to Nos. 10 and 11. Plate 90 a 5.
13. 26, E (eastern end). Fragment (3 x 3) of large bowl, much weathered. Violet glass, iridescent. Plate 90 a 2.
14. 564, G, 4.3 m. Fragment (6 x 5) of bottom of light green bottle. Circle and strokes in exterior of foot.
15. 651, F (cistern), 6.6 m. Ear-ring (1.8 x 1 x 0.05) in two colors. Exterior blue; interior light green. Page 15, No. 22.
16. 29, G, 0.5 m. Fragment of vessel (d. ca. 15). Green, iridescent glass.
17. 48, E (eastern end). Fragment (5 x 4) of vessel (upper d. ca. 14). Greek glass, greenish yellow, thick, iridescent. Perpendicular ribs on exterior. Page 15, No. 19.
18. 49, E (eastern end). Fragment (4 x 5) of vessel (upper d. ca. 16). Thick glass, light greenish yellow, iridescent. Perpendicular ribs on exterior. Page 15, No. 20.
19. 9, E (surface layer). Blue glass oval, one side flat (1.3 x 1.1 x 9.5). Setting for a ring?

## B. PASTE BEADS

1. 182a, I, 4.5 m. Green, Egyptian (1.6 x 1).
2. 192a, G, 2 m. Do. (1.6 x 1.1). Like No. 1.
3. 228a, G (slope), Do. (1.2 x 0.9).
4. 590, G (near altar), 4 m. Do. (h. 1, d. 1.2).
5. 716, vault, 5 m. Do. (1.1 x 1). Like No. 4.
6. 747, G (cistern), 5 m. Do. (1.3 x 1). Like No. 4.

## VII. BONE, HORN, TUSKS, IVORY, AND SHELL

## A. BONE

1. 71, G, 2 m. Hollow cylinder (d. 3.2, h. 2.2), each end sawed off. Sheep bone? Page 16, No. 18.
2. 4, A, 1.7 m. Dice cube (each side 1.2 cm.) made of section of hollow bone. The sides 1, 2, 5, 6, are indicated by appropriate spots. The other spots were on plugs, now lost, which once filled sides 3 and 4.
3. 549, A, 1 m. Handle of bone carved in form of twisted rope (l. 7.5, d. 1.7). Plate 90 c 9.
4. 748, H, 3 m. Handle with incised ornamentation (l. 5, d. 0.8). Page 16, No. 19; Plate 90 c 6.
5. 230, A, 2 m. Broken instrument of bone or ivory (l. 7.5, d. 1.5). Plate 90 c 8.
6. 84, G, 1.4 m. Weaver's needle, burnt at one end, stained black (l. 9.8, d. 2 at large end). Plate 90 c 17.
7. 172, I, 3.5 m. Stylus, broken, two pieces (longer, 8 x d. 0.5; shorter, 4.8 x d. 0.6). Plate 90 c 15 and 16.
8. 697, F (cistern), 9.5 m. Stylus or weaver's pin, broken (l. 10, d. 0.3). Plate 90 c 14.
9. 205, G, 4 m. Whorl (d. 2.1), button-shaped, smoothed by hand. Plate 90 c 10.
10. 732, F (cistern), 11.5 m. Whorl, flat (d. 3.1, th. 0.25). Plate 90 c 13.
11. 689, F (cistern), 9.3 m. Goat (?) and chicken bones, partly burnt. Plate 90 c 1-5, 7.

## B. HORN AND TUSKS

1. 82, G, 1.5 m. Part of deer's horn, sawed off at larger end (l. 10 x d. 2.3 and 0.3). Plate 90 c 18.
2. 66, G, 2 m. Two tusks of wild boar (l. 7 and 5.7 respectively).
3. 72, G, 2.5 m. Do. One split, one broken (l. 14.8 and 11 respectively).

## C. IVORY

1. 591, F, 4.3 m. Circular amulet (d. 1.2), with human figure standing between two palm branches. Israelite or Phoenician. Page 16, No. 21; Plate 90 c 12.
2. 28, G, 0.3 m. Button (d. 2.3, th. 0.4), perforated. Page 16, No. 20.
3. 230, A, 2 m. Broken instrument. See under Bone, No. 5.

## D. SHELL

1. 460, A, 1 m. Part of a sea shell, roughly hemispherical (d. 1.8). A weight? Plate 90 c 11.
2. 571, H (on rock, below east wall of Herodian temple). Sea shell (6 x 4.5). Red exterior.
3. 733, F (cistern), 11.5 m. Seven oyster shells, large and small (9.5 x 6.5 and 7 x 5).

PART II

PRINCIPLES, METHODS, AND GENERAL RESULTS

BY

GEORGE ANDREW REISNER

## CHAPTER I

### ORGANIZATION OF THE EXPEDITION

The American Staff—Representatives of the Imperial Ottoman Museum—The Egyptians—Local work-people—Gang system

*The American Staff*—The Architect of the expedition, Mr. Clarence S. Fisher, prepared all the maps, plans, and detail drawings. In 1909 he also wrote the greater part of the object cards. Mr. Oric Bates had charge of the card catalogue from June 1 to September 2, 1910; after his departure Mr. Fisher prepared all the object cards except those for the coins. I kept the diary, the photographic register, and the Arabic register of objects found, and assisted at times with the card catalogue of objects.

*Representatives of the Imperial Ottoman Museum*—Shawket Effendi el-Khalidi, of Jerusalem, served as Imperial Commissioner from June 4, 1909, to June 28, 1910. He had had a long experience with other expeditions, and was familiar with the scientific aims of European archaeologists. His family has always been friendly to Europeans, and he upheld its best traditions. In his intercourse with us he was courteous and gentlemanly, and showed his confidence in our good faith. In all official business he was prompt and efficient. He repeatedly protected us from the impositions of minor officials. In dealing with the people of Sebaste he never permitted encroachments upon our rights, nor extortions. He considered that we were working for the Ottoman Museum, and that it was his duty to assist us in every possible way.

Mohammed Sa'id Effendi Abd-el-Hady, of Nablus, who had served as Imperial Commissioner during part of the operations of 1908, was with us from May 28 to June 4, 1909, and again from June 28 to November 13, 1910. He was a younger man, with less experience in the ways of Europeans; but he was courteous in manner and, as he came to understand the thoroughness of our work and our registration, he left nothing to be desired in his conduct towards the expedition. He was of great service in settling complaints sent by the villagers to Constantinople and in arranging the final settlement with the landowners.

The sincere thanks of the Expedition are due to Hamdy Bey, and to his brother and successor, Khalil Bey, for the appointment of such eminently satisfactory officials.

*Egyptians*—The mainstay of the expedition in the actual excavations was the staff of Egyptian workmen brought over in 1909 and 1910, comprising overseers, photograph boys, and household servants. These men had been with me for many years in Egypt, and had had a long experience in the Hearst Egyptian Expedition, the Joint Expedition of Harvard University and the Boston Museum of Fine Arts, and the Nubian Archaeological Survey conducted

by the Egyptian Government. It was their trained skill, industry, and loyalty which made possible the careful examination of the enormous mass of debris turned over in the two seasons.

*Local Work-People*—The local workers were drawn mainly from Sebaste. We were dependent on the good-will of the townspeople in buying land and in other ways; and we felt, therefore, that they had special claims on the expedition, and gave them the preference. They showed some inclination to take advantage of their position as landowners; but a few cases of fines and dismissals checked this tendency. The village of Burka, notorious as a wild, lawless place, came next in numbers, and furnished a greater proportion of satisfactory workers than any other. The other villages from which we drew were Beit Imrîn, Nusf Jebil, Jennesinîa, Nâkûrah, and Deir Shûraf.

These people, especially the men, were at the beginning undisciplined, inexperienced, and indolent. It was our task to build up out of this mob an organized body of disciplined, industrious, and skilful workmen. The burden of training them fell on the Egyptians; but the very first requirement was to obtain a hold on the work-people. After long consideration, I fixed on a scale of wages which made our service the most desirable employment in the country. Men employed in excavating, Class I, were paid 11 piastres (Nablus) a day; Class II, 10 piastres. Women, carriers, Class I, were paid 9 piastres; Class II, 8 piastres. Children, Class I, were paid 7 piastres; Class II, 6 piastres.<sup>1</sup>

The effect of this scale was to give us the pick of a great number of work-people, so that we could have had several thousand at any time, and to make each workman extremely anxious to keep his job. We were thus able to formulate a set of rules and insist on a strict observance of them:

1. Every person must come every day, unless previously excused. Such excuses were rare, as no one wished to lose his pay.
2. Every person must obey absolutely the orders of the Egyptian over him, but with right of subsequent complaint to me, if he thought himself unjustly treated. Cases of insubordination were punished with fines, and, in four instances, with dismissal.
3. Every person must behave himself orderly in the works. Quarreling and fighting were strictly forbidden. The introduction of arms into the excavations by workmen or others was prohibited.<sup>2</sup> Obscene songs and conversation were also effectually stopped; but ordinary work-songs were encouraged, as they helped to pass away the tedium of the day's task.
4. Every one must work steadily during work hours. Laziness was punished by shifting into the next lower class, with decreased pay. Industry was rewarded by promotion to the next higher class and by extra payments given out on pay-day in the presence of the whole force.
5. The baskets must be filled with earth and carried out full. This was the most important rule, so far as the speed of excavation was concerned. The demands made on the strength of the basket-carriers were perhaps excessive; but, as the pay was good, a system of substitutes was proposed by the work-people and accepted by us which gave us practically two people for each wage paid. The mothers, sisters, and young brothers came out and took turns carrying the baskets of their relatives.

<sup>1</sup>These rates were in each class two piastres more than had been paid by previous expeditions.

<sup>2</sup>This rule, so far as it regarded outsiders, was usually obeyed without question; but otherwise was enforced by the Turk-

ish soldier. In one case a lad loaded with arms resisted, and struck the soldier; but Said Ahmed fell upon him with bare hands, and gave him so sound a thrashing that he ran away with a great clattering of his fire-arms.

Long before the end of the first year we had a body of well-disciplined people, gaining in skill and endurance with every day they were employed. In the second year we had men who could distinguish different kinds of debris, recognize and clean a floor, or clear a wall, as well as could be desired.

*Gang System*—For purposes of work the locals were divided into nine regular gangs, each under three Egyptians. A tenth gang, under one Egyptian, was raised by drawing men from the regular gangs, and employed for all heavy stone-work, such as breaking down walls, carrying stones, and building retaining-walls. The regular gangs varied in size according to the requirements of the work, having three to five pickmen with one or two Egyptians, five to eight hoemen with one or two Egyptians, and twelve to twenty-five basket-carriers. There were usually four Egyptians, including the head *reises*, or overseers, directing the basket-carriers and keeping the lines moving.

When a given area was to be attacked, it was divided into sections of from fifty to one hundred square metres in extent. Each gang was assigned one section, and all the gangs were expected to work with equal rapidity, so that, at any time, the area was cleared to the same stage all over. The Egyptians were held responsible for the work. When, as often happened in the season of 1910, the field became too crowded, a number of gangs were laid off in rotation. The Egyptians thus released were joined to the gangs retained, and added considerably to their efficiency.

## CHAPTER II

### METHODS OF EXCAVATION

Aims of excavation—Preliminary investigations—Disposition of debris by the strip system—Different kinds of debris—Operations that have modified the deposits of debris—Management of workmen—Methods of recording

#### AIMS OF EXCAVATION

The object to be aimed at in any piece of excavation is not merely to get out inscriptions and antiquities, and to trace the plans of buildings, but to recover every particle of historical evidence contained in the site attacked. Before the Harvard expedition began its work, the site of Samaria presented itself as a great hill, covered with a thick layer of earth under cultivation. The only remains of antiquity that were to be seen above the surface were some of the columns and towers of the Herodian city of Sebaste. The covering of earth was the result of a human activity extending over a period of nearly two thousand years. Quarrying and building, war and destruction, plundering for treasure and building-stone, ploughing and sowing, had buried in its depth a tangle of walls, thousands of objects, and many unbroken masses of debris. It was the work of the excavator to begin at the surface, and untangle as well as he could the series of human actions which had left their mark on the place. The problem was the reconstruction of the history of the site.

#### PRELIMINARY INVESTIGATIONS

It has long been recognized that a site should be excavated as a whole. The ideal thing at Samaria would have been to strip off the agricultural soil over the whole hill, and record the result by photographs and plans. Then we would have cleared away the Arabic buildings, wherever they could be identified, removed all debris resulting from Arabic operations, and made a second record; and so on with each period of debris and of buildings, equally over the whole area, until at last the remains of the Israelite occupation lay revealed over the entire hill. But as things were, such a method was impossible. The size of the site, the value of the land, and the expense of excavation were prohibitive. Moreover, under the Turkish law, which permitted a concession for two years only, it was not possible to make plans for a great undertaking of this sort. It was necessary, therefore, to adapt ourselves to circumstances.

I had examined the site in 1906, and was present at the beginning of operations in April, 1908, to advise with Dr. Schumacher in planning the work. My original idea had been to excavate the gateway, which was visible as two round towers on the west slope, and work up the hill to the summit. But the distance of the summit from the gateway, the great number of olive-trees in the

way, and the difficulty of dealing at the start with a large number of owners made this inadvisable. It seemed to me, however, that the summit was the important spot. The formation of the hill pointed unmistakably to the summit as the primary building site, the one which Omri would naturally select for a fortified palace. At my suggestion, Dr. Schumacher laid out a trench, EFG (Plans 14, 15), to be cut through the bluff and across the very top of the summit, designed to reveal any ancient wall which might form the basis of the bluff, to give an idea of the strata in the summit deposits, and to ascertain whether there was any large building on the site. When I took charge in 1909 and examined the work done in 1908, the desired result did not seem to have been wholly attained. There did not seem to be any large wall forming the bluff. As we afterwards discovered, fragments of the Greek Fort Wall were visible, but not recognizable as such. The stratification could not be made out clearly, although there were walls at various levels. On the other hand, a large building had been found, and identified as the temple built by Herod and dedicated to Augustus. The portico, stairway, and a space in front of the latter had been cleared, and three trenches had been driven southwards; viz., Trench H (40 m. long), along the east wall of the temple; Trench J (39 m. long), slanting SE from the middle of the portico; and Trench K (9 m. long), along the west wall. From an examination of Dr. Schumacher's notes and plan and of the trenches themselves, I could learn little more than that a temple had stood on the summit, and that the debris deepened towards the western bluff. Except for a few limestone blocks in Trench E, there was nothing in sight which looked like an Israelite royal building.

In short, the whole problem of the history of the site remained to be worked out. As the temple required excavation and was a dated point of departure, we undertook to clear this as the first piece of work.

#### DISPOSITION OF DEBRIS BY THE STRIP SYSTEM

Before we could begin, we were confronted with the problem of dealing with the earth excavated in 1908, most of which had been piled up beside the trenches from which it came. I selected the southeast corner, east of the temple, as the place to begin. The plan adopted was to sacrifice a ten metre strip along the eastern edge of our land to receive the earth from the first section (S1<sup>1</sup>, Plan 2). By excavating S1, throwing the earth upon the reserve strip, we should gain room for the earth from the temple (S2). The earth from the next section (S3) was to go on S2, and so on around the hill, excavating and filling in, section by section, until the last section was to be filled in from the original dump-heap on S1 and the reserve strip. This is the only possible method of dealing economically with debris on a site where the excavator must pay for the land, and is required to fill in after excavation, leaving the site in condition to be restored to agricultural uses.

<sup>1</sup>The following abbreviations are employed: S1, S2 (Strip 1, Strip 2, &c.), L. T. (Lower Terrace), L. T. E. (Lower Terrace East), C. T. (Cliff Trench), and R. T. (Roadway Trench) indicating, respectively, the strip or section excavated on the

summit and to the south of it in 1909-1910. The trenches cut on the summit in 1908 are designated as Trench E, F, G, H, I, &c.



This plan had to be modified later, because it seemed advisable to leave S2 open on account of its general interest. When this decision was reached, the problem of a dumping-place was attacked in a similar way from the south. It was desirable to cut a trench from the south across the Herodian Road of Columns, up the bluff to the lower terrace (L. T.) south of the summit. The earth from this roadway trench was, by an arrangement with the adjoining landowners, spread over the ground under the olive-trees to a depth of about one metre (a treatment which was said to be good for the trees). The earth from the Cliff Trench was slid down to the Roadway Trench, which it did not fill. The Cliff Trench itself formed a chute, through which earth from above could be shot down into the rest of the Roadway Trench. The Lower Terrace (L. T.) was divided into narrow sections running east and west. The earth from No. 1 went down the chute, from No. 2 into No. 1, and so on up to No. 5, which was really on the southern edge of the summit. Then, leaving S2 open, the earth from S3 went into L. T., that from S4 and S5 into S3, and so on around to the north. In S5 the work was blocked by the unexpected puzzle presented by the Israelite Round Tower and the southwest bastion of the Greek Fort Wall, so that we were unable to cover up S5 from the next strip. Rather than stop work, our time being limited, we turned to the space in front of the temple, made a second reserve strip in continuation of the first one, and began working around the hill from the opposite side. In this way we were able to work alternately, first from one end of the series and then from the other. Finally, a small section (S11 North) was left open, and filled in from the dump in front of the temple at a cost of about 36 napoleons. With this exception, none of the debris of 1909 and 1910 had to be moved a second time.

As shown above, the practical difficulties encountered forced us to adopt a strip system of excavation instead of the preferable plan of excavating the site as a whole. The disadvantages attaching to this system we sought to minimize by leaving the walls on the edge of each strip exposed until connected with the walls in the adjoining strip, by very careful records, including plans, sections, and photographs, and by making the strips as wide as possible.

At first the attempt was made to remove the debris layer by layer; but this was quickly found to be impossible, for as soon as the cultivation stratum had been removed there were no regular horizontal strata. The debris of decay of each period had been considerably disturbed during the construction of the buildings of the next period, in the search for building material and in the effort to place the new foundations on rock. As a result, foundations of all periods rested on the rock, and stood side by side. (See Pl. 2 b.) Amid this apparent confusion, however, the successive deposition and disturbance of strata proved easily traceable, at least over certain areas.

#### DIFFERENT KINDS OF DEBRIS

The attention given to the study of the debris is one of the most important features in the method of our work. The results of that study are not only of value for other excavations, but are indispensable to an understanding of the

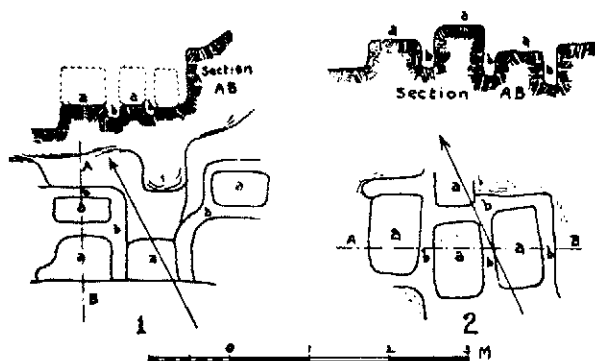
history of the site. It is necessary, therefore, to outline at the beginning the final conclusions reached in regard to the different forms of debris and the various activities which modified them. The terms here defined will be used throughout the volume.

The principal kinds of debris which it is important to distinguish are six:

1. Geological Debris; 2. Mason's Debris; 3. Debris of Occupation, or Floor Debris; 4. Debris of Decay; 5. Dumped Debris; 6. Silt.

Geological debris differs from all the other kinds in that it was not deposited by human agency. It is marked by a homogeneity and cleanness which make it easily distinguishable by the eye. The dirty surface of a packed stratum of limestone debris may be mistaken for the dirty surface of a limestone rock, but a few blows of the pick reveal the difference. At the summit there was no geological debris. The whole rock had been stripped clean for quarrying, and it was only here and there in a small crevice that we found pockets of the reddish gravel seen on the surrounding hills.

In uniformity and cleanness, quarry debris and stone-cutter's debris come next to the geological debris. (See Pl. 53 a, lowest layer above staff.) The Israelite stones were all cut on the site, in the usual wasteful manner of antiquity. The rough block was obtained by cutting a channel 2-20 cm. wide



1. Quarries. Scale, 1:100.

and 20-50 cm. deep, on four sides (see Pl. 15 b, c, and Fig. 1), and separating it from its bed along the horizontal rift by prying. Thus, in cutting stones of the size used in the Israelite palace, about fifteen per cent of the stratum is broken into small chips. In all periods, except perhaps the Roman, the stones for the walls were squared by the masons on the site of the building, and the faces

were dressed flat after the walls were built. Both these operations gave rise to quantities of stone chips and dust—yellow limestone in the Israelite period, grayish-white limestone in the later periods.

The clean yellow debris was usually found just above the rock, especially in the hollows and enclosed spaces. The surface was always foot-worn, trodden smooth by the feet of the builders. The mason's debris was also used for filling foundation spaces in the Israelite buildings, and in that case was usually mixed with a certain amount of earth. Such filling is designated by the term "dirty yellow debris." (See Pl. 53 a, second layer from below.)

The accumulation of debris during the occupation of a site is built up of thin layers, always very dirty, often with sweepings in the corners. This floor debris contains a number of small objects, potsherds, coins, nails, and the like. At the summit, debris of occupation was found in the streets and passages, less often in living rooms. (See Pls. 20 a; 24 d; 33 f; 53 e, f.)

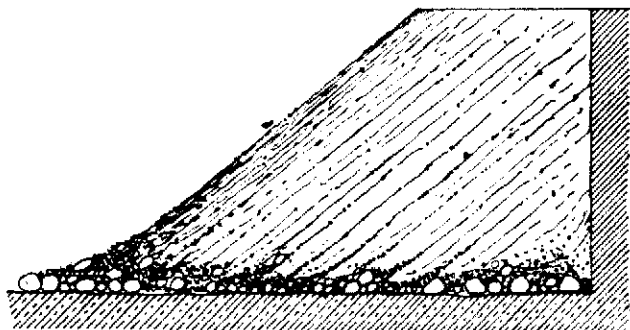
Debris of decay may consist of almost any sort of fallen walls, rotted stones, and burst foundation-fillings. It has nearly always been disturbed by man in searching for treasure or for building-stone. Its most characteristic features are its

irregular, weather-worn surface and the absence of regular strata. The hollows and lower slopes sometimes show fine strata, deposited by rain or wind. (See Pl. 46 a.) In the case of strata thus formed, the slope is always less than the gravity slope of the debris.

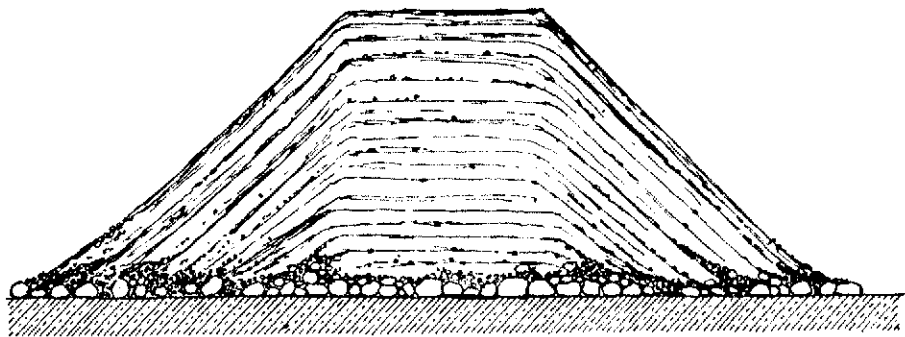
Debris laid down by dumping is the most easily distinguishable of all. It may be assumed that any thick layer showing fine parallel stratification was deposited by dumping. This does not apply, of course, to river bottom and sand beds, but no such beds were found at Samaria; nor does it apply to layers of silt in cisterns, of which there were many examples.

The examination of any dump, such as is found in modern excavations, shows that the outer slope of the debris is the gravity slope of the fine part of the debris. Most of the coarser debris—pebbles, potsherds, and the like—separates itself out of each basketful as it is thrown down, and rolls to the foot of the slope, forming a sort of talus. (See our dump-heap in S7, Pl. 37 b.) The gravity slope of this coarse debris is much less than that of the fine debris, and therefore the talus slopes out in front of the dump. When the debris is moist, the fine debris clings to the slope at an angle slightly greater than the gravity slope of the dry debris, so that from time to time knobs of overweighted debris are jarred off the slope and slide down to cover the talus. In consequence, the section of a dump shows the talus as a series of irregular pockets of coarse debris along the surface on which the dump is found.

If the section be taken along the axis of the dump (see Fig. 2), the lines of the fine debris have a gravity slope of perhaps  $30^{\circ}$ – $40^{\circ}$  to the horizontal. If the section be taken across the axis, the lines of the fine debris are either curving, in a fan-shaped dump, or straight and horizontal with sloping sides, in a broad dump (see Fig. 3), which grows uniformly along its outer edge (see Pl. 37 b). At other angles to the axis, the lines of fine debris may show all the gradations from the gravity slope to the horizontal.



2. Longitudinal section of dumped debris.

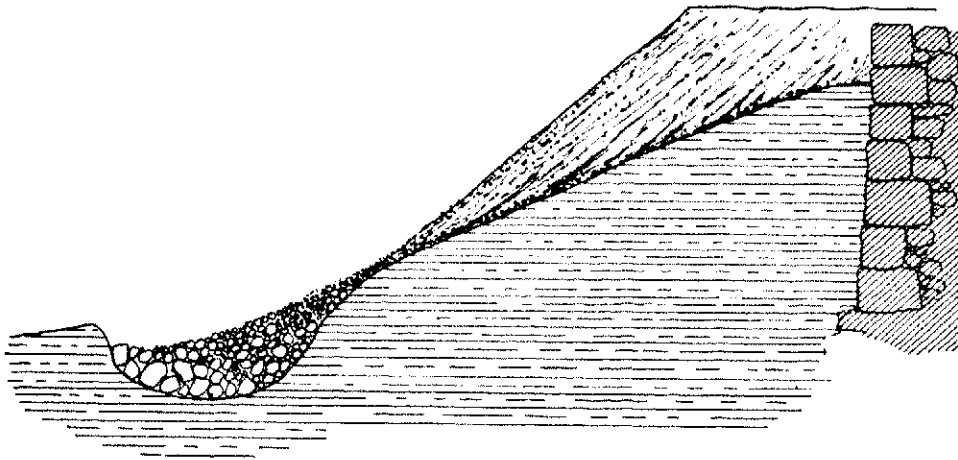


3. Cross-section of a flat-edged, broad dump.

which was deposited by dumping when the Street of Columns was filled for agricultural purposes; and Pl. 54 d, where the layer of potsherds forms the talus of the second stratum at the Basilica.

Dumped debris is thus distinguished from the debris of decay by its regular and fine stratification, which shows in some one section the gravity slope, and by the pockets of debris beneath it. See Pl. 46 c, on the left, where a thick layer of stones is shown,

The variations produced by irregular and sloping ground are usually easily recognizable; but one case requires particular mention. When the dump is made

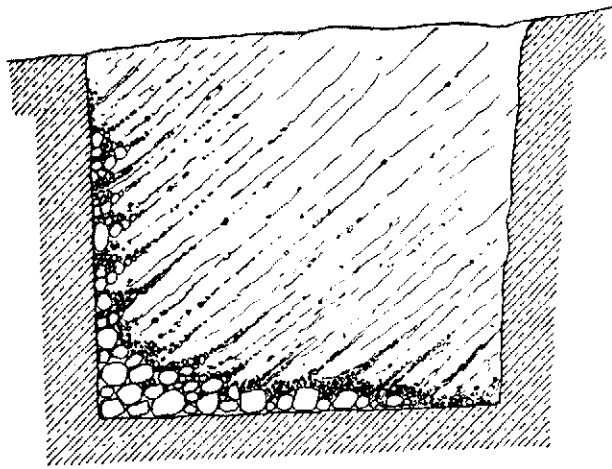


4. Longitudinal section of separated dump (L. T. 5).

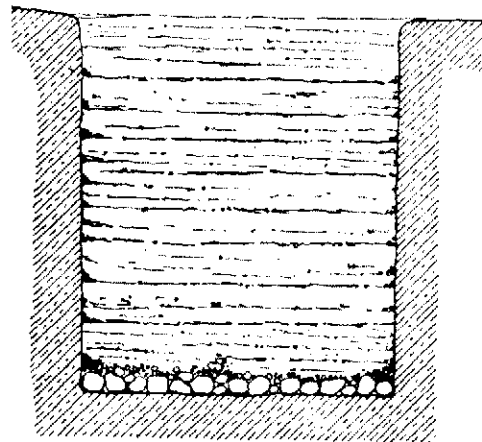
on a surface with a slope less than the gravity slope of the fine debris and greater than that of the coarse debris, there may result a complete separation of the two, so that the body of the dump does not present pockets of coarse debris along the ground (see

Fig. 4). This was actually the case in L. T. 5, south of the Herodian Temple; but the dump had been continued out over the large pocket of stones.

When this dumping takes place in a confined space which is being filled, the talus continues not only along the bottom of the space (or hole), but up the wall towards which the dump is formed (see Figs. 5 and 6).



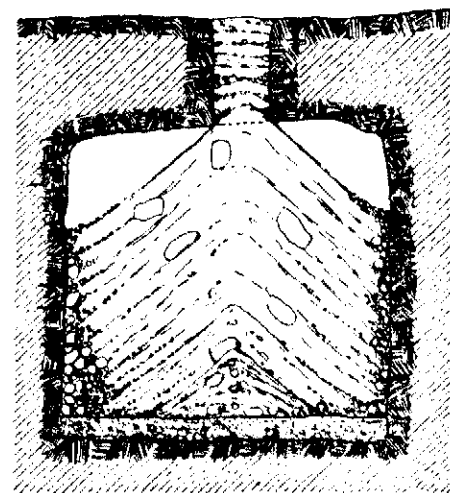
5. Longitudinal section of confined dump.



6. Cross-section of confined dump.

When a cistern is filled by dumping, the same general principle holds. A cone of fine debris on a gravity slope is formed, with coarse debris around the sides (see Fig. 7). But, owing to the clear fall before striking the bed of fine debris, many heavy stones stick fast on or near the summit of the cone, and, in excavation, are found embedded in fine debris.

When narrow trenches, especially shallow ones, have been filled, it is very rare to find the stratification characteristic of dumping (see Pl. 53 d). Probably such trenches were in some cases filled by raking in masses of earth from the side; in others, the scattering from the baskets covered the whole width of the trench, and filled nearly the whole trench simultaneously.



7. Section of debris in cistern, S1, No. 7. Scale, 1:100.

At Samaria silt is found only in the bottoms of cisterns. It is important, however, for this deposit was formed during the time when the cistern was in use, and datable objects found in this debris may be used to date the cistern and the house to which it belonged.

#### OPERATIONS WHICH HAVE MODIFIED THE DEPOSITS OF DEBRIS

The forms of the deposits of debris are affected by later building operations, by plundering, and by agriculture.

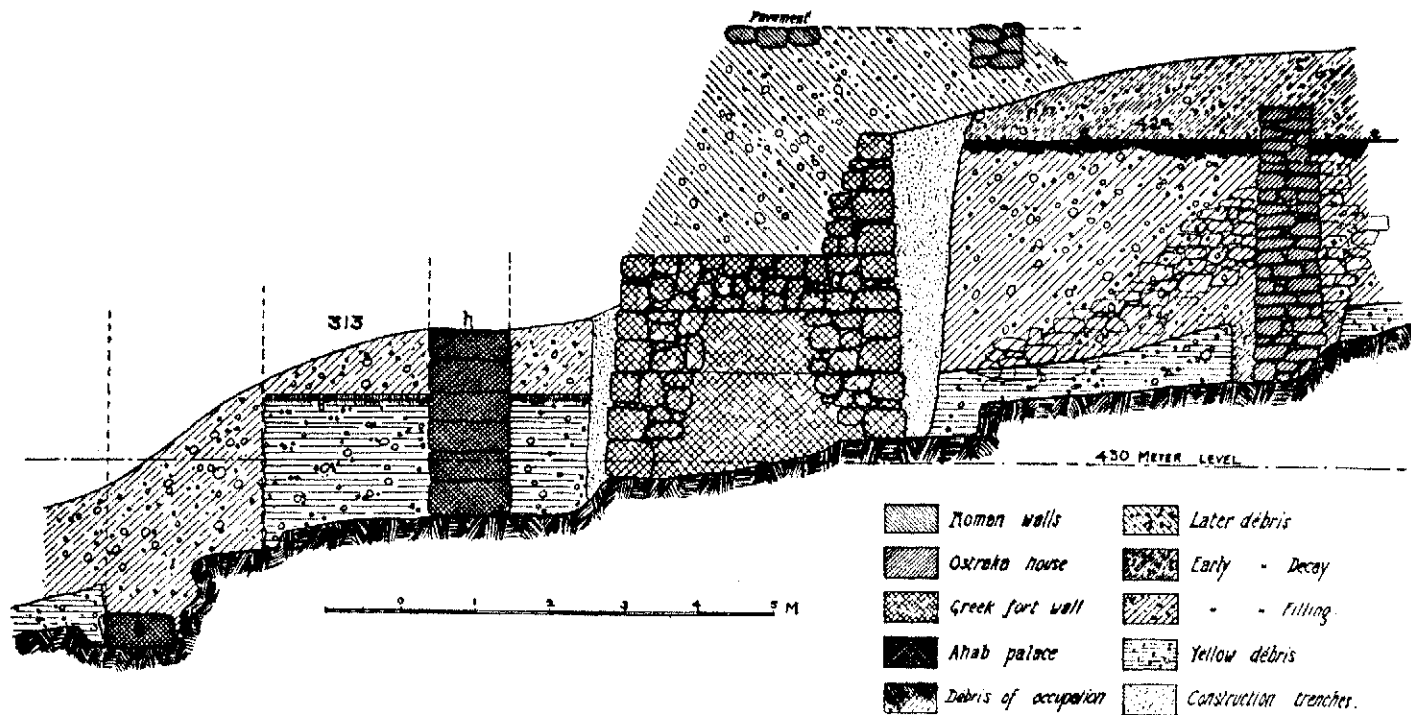
The building operations which affect older deposits may be divided into four classes: removal of stone from earlier structures (stone theft), leveling, digging trenches for foundations, and excavation for subterranean constructions.

The removal of stone in ancient times was effected by simply following down a wall the top of which was exposed, for instance the Israelite walls in S7, S8, S11; or by removing a slope and its supporting wall, as in S3. In Roman and modern times, besides these methods, a large pit was sometimes dug through to a lower stratum, and all the stones over a considerable area removed down to rock, as in H. S. 1-3 (Pl. 7 a, right foreground). The mere removal of a wall does the least damage, since the trench is refilled with a different sort of debris, and, with careful excavation, can be followed as certainly as if the wall were still standing. (See Pl. 53 d.) This was the case in S7, S8, S11, where the place of the Israelite walls was occupied by black-filled trenches crossing the yellow debris. But in the other cases the surrounding debris had been removed along with the wall, and nothing was left except the very lowest stratum and the scars on the solid rock. (See Pls. 26 c; 28 a; and 29 c.)

One of the most common accompaniments of building operations is leveling. When a spot like the summit of the hill in Samaria becomes a town site, every available slope is terraced to gain level building space. (See Pls. 15 a; 16 a; and Plan 3.) This operation destroys the strata and the walls on one part of the slope, but covers and preserves those on the other part. The general result is always extremely confusing. Still more destructive were the great levelings made in the construction of platforms and temple areas. When, as in the case of the Herodian Temple, the building is approached by a stair, and the platform level is below a more ancient level, whole blocks of older houses may be swept out of existence. (See S6, Pl. 16 a, and Plan 3.)

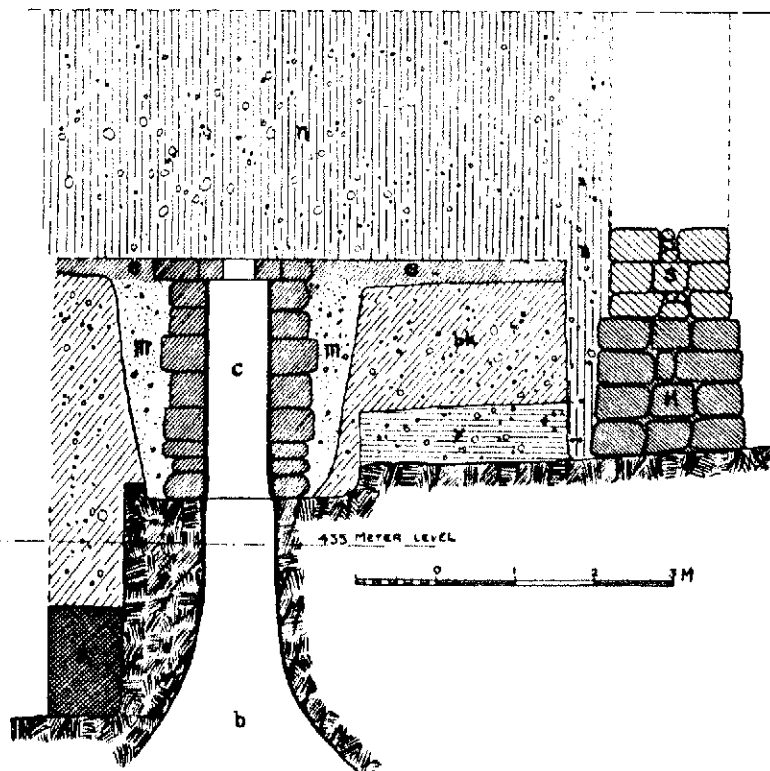
In considering the effect of the construction of foundations, buildings may be divided into two classes, those with foundations on the rock (large public buildings) and those with foundations sunk only a metre or so in the soil (private houses). Both sorts of walls appear to have been built in construction trenches, which cut and disturbed the older strata. The destruction wrought by the large walls carried down to the rock was naturally the greater, but it is less confusing, because it can be more easily recognized. In the case of the larger buildings, a trench 40-80 cm. wider than the wall desired was cut through all levels down to rock or to the Israelite walls. After the wall was built, this trench was filled in with debris easily distinguishable from the older strata beside it. The result of this is the formation

of vertical strata of late date—in some cases Herodian—side by side with Greek and Israelite horizontal strata. (See Fig. 8 and Pls. 53 a, b; 15 d, cf. 16 b; 46 c.)



8. Section of construction trench of Greek Fort Wall between strips 3 and 4, looking west. Scale, 1:100.

Of all forms of building operations the most destructive to the ancient deposits of debris are the subterranean structures. These are cisterns in the rock, cement-lined vats in the lower debris, and the great subterranean vault and corridor of the Herodian Temple. In digging the cisterns, a great construction pit was sunk through all strata to reach the rock, and filled in (like the construction trenches) after the shaft was built. (See Fig. 9 and Pl. 53 c.) In some cases this pit was utilized for the construction of a stairway leading down to the rock mouth of the cistern. The vats were, as a rule, simply holes dug in the underlying strata. Sometimes the hole was lined with rubble and cemented (see Pl. 7 b); more often the cement was laid directly on the sides of the hole (see Pl. 4 c). The great temple cellar was dug through all buildings and all debris, and lined with stone. (See Pl. 24 c-e.) The disturbance of older deposits of debris caused by all these underground structures must be carefully traced and eliminated in dealing with the older debris and the older buildings.



9. Construction hole (m) of cistern S2, No. 14. H, Herodian; S, Severan; y, Israelite debris; bk, black debris; e, Preherodian floor. Scale, 1:100.

The damage caused by plundering could not be identified, except in the case of plundering for stone, described above.

The cultivation of the soil leads to two different operations: terracing for cultivation, and cultivation itself. The actual ploughing of a field and the clearing it of stones destroys all surface strata and walls to a depth of only about 30-50 cm. The leveling is more serious in proportion to the area involved. At present the tendency is uniformly towards a denudation of the summit, but there have been periods of accumulation by the removal of earth from lower to higher ground.

The hill, as we approached it, presented a mass of broken horizontal and vertical strata, and some time elapsed before we recognized the significance of all its features. When it became clear that regular horizontal strata were not to be expected, the plan was adopted of clearing steadily downwards along the walls until we found a floor-level either actually existing or indicated by the foot of a superstructure wall on the surface of a different kind of debris. Then we cleared along this level. At first, puzzled by the filled holes, we sliced out the filling level with the surrounding floors and surfaces. But after the first few weeks these filled holes were completely cleared in connection with the higher stratum from which their filling had come. Finally, with a knowledge of our deposits which made it possible to recognize almost instantly the character and age of the debris, we were able to proceed with great consistency; removing surface debris (cultivation layer), registering any late field walls found in this; clearing down to the first floor-level, including the holes broken through the floors; then to the next; and so on down to the upper surface of the lowest yellow debris. Finally, the yellow debris was cleared away, revealing the bare rock with the walls which stood on it.

#### MANAGEMENT OF WORKMEN

It is indispensable to a thorough, scientific examination of a site that the work be performed by a trained staff, and a trained gang of workmen who go through the necessary operations as a matter of habit. The ordinary rules are obvious. Workmen must distinguish between fallen stones and walls; stones struck with the pick in the debris are not to be pulled through the debris, but cleared; no floor is to be broken except by order, even when it is only a thin layer of harder earth; every fresh stratum is to be worked by itself, but only on order; the objects from each sort of debris are to be kept separate; the workmen must have enough knowledge to recognize important objects; such objects (whole pots, inscriptions, statuettes, etc.) must be left in position and reported at once; no cave or other room is to be entered except by a special order; no pot, box, or other receptacle, is to be emptied except by order. Each man must know his place and his work, the extent of his responsibility and his authority. Every director must work out this side of the problem in his own way. But it must be remembered that the workmen are merely the excavator's hands, and the closer the connection between the actual diggers and the directing intelligence, the more satisfactory the



result. The excavator must speak the language of the workmen, and give his orders directly to the men.

Another most important point is to cultivate the loyalty of the workmen. It may be taken as a rule that good pay, steady work, kind but firm treatment, must be the basis of all Oriental faithfulness. Good work and faithfulness must be rewarded, and the opposite punished. Mistakes in this matter are fatal. Beyond this, no hard-and-fast rules can be laid down. One man may handle his men with great success by a cold affectation of superiority, another by cordiality and good-fellowship. Natives who have been efficient and successful workmen with one European are flat failures with another. Every excavator must solve this problem for himself. The fellah, both in Egypt and in Palestine, understands personal loyalty, and has practiced it for ages. It is only necessary for the excavator to be loyal to his men to gain their loyalty for himself. Without this it is impossible to hope for an efficient corps of workmen.

#### METHODS OF RECORDING

When it is remembered that every excavation destroys historical material which has been accumulating for ages, it is clear that no pains in recording the work are excessive. No future excavator can verify or confute the evidence or the interpretation. The deposits are gone for ever. The only justification that a man can offer for this destruction is a record as unprejudiced and mechanical as the technical means of his day permit. It is the excavator's duty to put his archaeological colleagues and successors as fully as possible in his own place, and with notes, maps, plans, and photographs, to enable them, as far as possible, to reconstruct graphically the progress of the work.

The records of the Expedition to Samaria in 1909-1910 consisted of the following series:

*Diary*—Written daily with ink in a duplicating carbon book. The originals were sent at intervals, usually weekly, to the Harvard University Committee, while the duplicate book was kept on the spot. The diary dealt with all current events, and with the progress of the work. At the end of each season the duplicate book was copied out on the typewriter. Each paragraph was dated, and marked with letters indicating its contents. The typewritten sheets were then cut into slips, each dealing with the events of one date at one part of the work. Finally, these slips were assorted, and pasted in blank books in chronological order, so that we had a book for each of the following heads: 1, Administrative Events; 2-12, Observations on Strips 1-11; 13-21, Observations on the Basilica (13), Gateway (14), Roadway Trench (15), Cliff Trench (16), Lower Terrace (17), Kaid's Land (18), Samarra's House (19), Samarra's Land (20), Lower Terrace East (21).

By this means it was possible to review in chronological order the record on each section of the work without hunting through a diary index. From time to time the conclusions on various points were summed up, and usually also entered in the Diary or the letter book.<sup>1</sup>

<sup>1</sup>A summary of the Diary is printed in the Appendix to this volume.



*Maps and Plans*—*a.* Plan of the whole site, prepared by Dr. G. Schumacher in 1908. Scale, 1 : 2500. *b.* Plans and sections of each area excavated, on a scale of 1 : 50, with the several periods represented by different colors. *c.* Plans and sections of each building, or the buildings of each period, on a scale of 1 : 200. *d.* Drawings of details of masonry, ornamentation, etc. The plans, sections, and drawings *b*, *c*, and *d*, were made by Mr. Fisher. *e.* Sketches of deposits of debris, etc., usually roughly drawn in the Diary.

*Register of objects found*—Each gang had one or more shallow wooden trays in which to place objects found during the day. Important objects were usually taken immediately to the camp. Slips of paper with the date and a note of the provenance were placed in the trays by one of the staff. The provenance was indicated by the number of the section, letters for subdivisions of surface debris, room numbers in other debris, and a note of the relation to the floor. Thus, "S4 c" designated Strip 4 at the summit, division c (worked by gang vii), the debris above the first floor found; "S4-417 sub" designated Summit Strip 4, room 417 (Ostraca House), the deposit of occupation debris. Any further information needed could be gained by referring to the Diary of the date in question.

Each object, after being brought to the camp with its slip, was entered on a small card, 12.5 x 7.2 cm., bearing in the upper right corner a running number, provenance, and date; in the upper left corner, material, name of object, age (when known), and in the middle a drawing (1:1, 1:2, 1:5, or 1:10)<sup>1</sup> of the object, with measurements and remarks. During the year 1909, owing to a misunderstanding with a man who was engaged as assistant for this work but who failed to come or to give us notice until late in August, the work of making the card catalogue accumulated until the latter part of the season. But in 1910 the objects were entered regularly the day after they were found. The total number of cards prepared was 4154. Later the photograph of each object was pasted on its card, and the registry number of the photograph entered thereon.

After the cards were prepared, their contents were entered in two books, viz., a duplicate Arabic register and a duplicate English register. The Arabic register was written by the Imperial Commissioner from my oral translation. Mr. James Trimble copied the cards of 1909 into the book, Mr. Fisher those of 1910.

After preparing this permanent register, the cards were used in the preparation of the publication. They were first classified according to provenance and date, and copied on a type-written list; so that it was possible to review at any moment the objects found in any particular place. In dealing with the groups of objects, the cards were rearranged according to classes—pottery, stamped jar handles, coins, etc. The Arabic register was used also as a packing-list. The boxes were numbered, and the number of the box was entered in the left-hand column of the register as each object was packed.

In addition to the card catalogue of numbered objects, a card catalogue was kept of a large number of potsherds and other fragments which were not of sufficient importance to bring away. These cards contained the same sort of infor-

<sup>1</sup>As the result of our experience, we came to the conclusion that all small objects should be drawn 1:1; pottery and objects of similar size, 1:5.

mation as the regular cards, but they bore numbers preceded by 0. These are the numbers referred to in this publication as "Dis. Nos." The objects themselves were buried on the site.

*Photographic Record*—A photograph was made of each stage of the excavations, of details of masonry, of blocks and sections of debris, and of objects. Four cameras were used, two large cameras for plates 18 x 24 cm., and two small cameras for plates 9 x 12 cm., all made by A. Stegemann of Berlin, with Zeiss anastigmatic lenses. The objects found were photographed in groups every week or ten days.

Every morning the negatives of the day before were set on my work table for inspection, and, after approval, delivered to the print boy. At the same time the prints, three for each negative, of the plates taken the second day before, were presented, and, after approval, handed to Bedawi Ahmed to be stamped with the date and the running numbers. The prints and plates were stacked by him in wooden boxes so as to be readily accessible. The prints were entered in the photographic register by myself at convenient times.

The photographic register was divided into three parts, lettered A (for plates 18 x 24 cm.), B (for plates 13 x 18 cm.), and C (for plates 9 x 12 cm.). The register had seven columns, giving respectively the number of negative, description of subject, place, date, name of photographer, size of plate, and remarks. The number of negatives entered is as follows:

	A	B	C	Total
1908 . . . . .	187	6	290	483
1909 . . . . .	297	288	760	1345
1910 . . . . .	189	254	650	1093
Total . . . . .	673	548	1700	2921

The average for the campaigns of 1909 and 1910 was about 1200. This is, I believe, a satisfactory number for a site like Samaria, but, of course, it would not be at all sufficient for an ordinary campaign in Egyptian cemeteries.

## CHAPTER III

### IDENTIFICATION OF THE REMAINS OF THE SEVERAL PERIODS

The problem—Roman and Herodian buildings—Latest Preherodian buildings—Seleucid and other Greek remains—Early Post-Israelite remains—Israelite buildings—The rock skeleton—Rock cuttings and caves

#### THE PROBLEM

The main problem at Samaria is the correct identification of the various buildings with those which, from historical records, are known to have existed there. It is necessary, in the first place, to connect the buildings scattered over the site each with some particular period, and, in the second, to determine chronologically the periods represented by them.

The identification of the buildings belonging to any one period was complicated by the form of the hill, and by the penetration of older strata by later buildings. The slopes of the hill could be used for building sites only by means of terraces, which in certain areas entirely obliterated the older buildings. The penetrations in the older strata placed the foundations of several periods side by side on the rock, and introduced later objects into the lowest levels. It was necessary to rely to a great extent on the types of masonry, the orientation, the relative position of floors, the objects in the undisturbed blocks of debris, and the character of the debris.

The most easily identifiable buildings were those belonging to the Herodian period. The Basilica, clearly dated by the inscription of Annius Rufus (see Pl. 59 c) and by the contents of the cisterns, gave us the types of masonry and the forms of architectural details used in the Herodian buildings. (See Part III, p. 167 ff.) To this group belonged the earlier temple on the summit, the Street of Columns, the Gateway, and the great City Wall.<sup>1</sup> At all the points where we excavated, we were able to identify the buildings of this period, and to use them as a fixed point for the dating of the older buildings.

#### ROMAN AND HERODIAN BUILDINGS

The key to the whole mass of deposits was given by the Roman buildings at the summit. The great building, identified as a temple by its form and its altars, with the houses around it, presented a series of floors and floor-levels beneath which all buildings and deposits, except construction trenches, cisterns, and subterranean rooms, were from a time earlier than the Roman period.

The temple itself, in its present form, was assigned, on the evidence of the inscribed altars (Reg. Nos. 198 and 752; see Pl. 59 d, e), to the time after Sebaste was made a Roman colony by Septimius Severus (about 200 A.D.). At that time the temple consisted of the altar (or pedestal; see p. 48), the stairway, the stone-paved portico, the vestibule, and the cella, as shown on Plan 9. (See also Pls. 17 to 24.) On the northwest was the subterranean vault, approached by a subterra-

<sup>1</sup>Like the Temple, this City Wall had been rebuilt after Septimius Severus made Sebaste a *colonia*.

nean vaulted corridor the entrance to which lay somewhere out on the northern slope beyond the limits of our excavation. On the west was a series of houses, of which we found only a few subterranean vats and foundation walls in S4, S7, and S8 (see Pl. 33 a). The floors were not found, as the summit had been denuded below their level. Nevertheless, the floor-level may be assumed with some confidence to have been nearly the same as the level of the temple floor. On the south there were similar evidences of buildings which had been almost completely swept away by denudation (circular vat and caldarium in L. T. 5 d). Around the north-western edge of the summit, where the debris had been held up by the older Fort Walls, traces of a heavy wall and of a street were found. From these meagre remains it is impossible to attempt a reconstruction of the summit in the time of the Severan colony. We can only say that the temple was restored, and stood in the midst of houses, the whole being surrounded by a strong wall and a street. The main characteristic of these houses, so far as preserved, was the circular form of the vats or baths. The orientation was similar to that of the temple, as in Herodian times. The temple of this period was a restoration of an older temple, as is proved by the following facts (see Plans 8 and 9):

Under the portico pavement were the foundations of an older stair (see Pls. 18 e; 19 a). Between the two was found a coin of Nero (Reg. No. 1689; see Coins, below, A V 19 a on p. 268).

The portico, as found, was about 50 cm. wider than the body of the temple, extending beyond it 30 cm. on the east and 20 cm. on the west, and had foundations of a different masonry. The foundations of the older portico, being continuations of the foundations of the body of the temple, were not destroyed flush with the front wall of the vestibule, but ran sloping down under the later foundations (see Pls. 38 a and 18 d).

The vestibule showed two different forms. The older was a plain, shallow, rectangular room, according to Mr. Fisher a portico; the later was deeper, and broken on the sides by continuations northwards (pilasters) of the inner cella walls. The earlier walls rested on rock; the later walls rested on debris (see Pls. 6 c; 10 c, d).

The west walls of the cella showed old foundation walls resting on rock, and later walls separated from the older foundation walls by a layer of debris (see Pls. 11 a; 10 c; 36 a, b).

The projecting structure on the west side is of the same masonry as the older parts of the temple (see Pl. 36 a, c). It was covered in the later period by a long wall built against the west side of the temple (see Pl. 31 b).

Both the vault and the subterranean corridor showed reconstruction. The earlier corridor had a row of square pillars down the middle (see Pl. 24 e), which probably supported a double vault. The later corridor was roofed with a single vault (see Pl. 24 c, d). The older corridor was wider, and the faces of the walls were found behind the later walls (see Pl. 23 b). The older corridor was approached by a stair on the west, closed by the later wall (see Pl. 40 c).

It is clear that the older temple had fallen into decay, and had been used as a quarry, long previous to the restoration in the time of Severus. This fact of itself

suggests that the older temple belonged to the Herodian period, which was, so far as is known, the next earlier age of great constructions at Samaria. The temple is, in fact, to be identified with the temple of Augustus built by Herod the Great, as narrated by Josephus, for the following reasons:

The masonry is very fine, much better than that of the restoration, and the foundations are on the rock, as befits such a temple as Herod's.

The masonry and the architectural details are of a characteristic type, identical with those found in the Herodian masonry at the Basilica, the Street of Columns, and the Gateway (see Part III, p. 177 ff).

No Roman objects were found in any of the filling inside the temple. The coin of Nero found under the Severan pavement was *above* the debris of decay of the Herodian stair. Many coins were found below this debris, but none later than 30 B.C. The filling of the cisterns—that in the street under the pavement, vault cistern 2, corridor cistern 1, S6 cistern 1, and the cisterns in S2—did not contain Roman coins or objects later than about 30 B.C.

The large marble statue found in front of the temple is that of a Roman emperor. It is of such size and workmanship as would hardly have been possible at Sebaste in the Severan period.

Probably the temple, being a temple of Augustus, never enjoyed any popularity, and was kept up only by the Idumæan dynasty and the contemporary Roman officials. During the Second Century A.D., when Sebaste was not an official residence, the temple was almost certainly left to the mercies of a population devoted entirely to its own local affairs.

The explanation of the fact that the foundations of the portico of the restored temple were deeper than those of the cella lies probably in the form taken by the ruins of the older temple during the Second Century A.D. The place of the old stair, when the reconstruction was made, was marked by a declivity. The new stair and the portico were built on this declivity, which was easy to excavate. Farther back, the old foundations could be utilized. Probably the stones of the older steps, as many as were still preserved, were used again in rebuilding the stair.

The Herodian Temple (see Plan 8) had been approached from a wide open space in front. A great stair led to a landing running the width of the building. Then came a narrow vestibule, or portico, also the width of the building; and behind that, a cella, probably with interior rows of columns along the sides. On the west was a rectangular platform, possibly the foundation of a staircase leading to the roof.

The so-called altar in front of the stair presents certain difficulties. On the analogy of other Roman temples this structure ought to be an altar. But the great statue of Augustus was found near it; and, moreover, a rough ramp had been built up against the northern side of the structure, as if there had been, at some time, an intention of mounting the statue thereon as on a pedestal (see Pl. 18 b). But the structure, itself weak, was founded only on a thin bed of rubble resting on debris, and could never have borne the weight of the statue. Nor was its long rectangular form adapted to the square base of the statue. It was therefore not built as a pedestal for the statue, but as an altar. The statue, which must have belonged

to the Herodian Temple, may have stood in the portico above, or on a pedestal which has been destroyed. It fell or was thrown down, and, probably in the course of the restoration, was found in front of the stair.

Definite proof of the date of the altar itself was lacking. The masonry of the altar is not decisive, as we have no other similar structure of either of the two periods with which to compare it. The situation of the altar, however, pointed to the Herodian period. It was founded on a light rubble platform resting on rock, and was surrounded by a hard, plastered floor on a level with its base. This floor extended more than 22 m. northwards from the stair and was 80 cm. below the lowest stone step of the reconstructed stair (Severan period). This lowest stone step rested on a foundation wall descending to rock, but there were three earthen steps below it, not reaching, however, to the plastered floor. The altar was, moreover, too close to the later stair for appearance or for the line of vision towards the temple entrance. With reference to the older, or Herodian, stair, on the other hand, the situation of the altar was in every way suitable. It seems probable therefore that the altar was constructed in the Herodian period and re-used, possibly re-reconstructed, in the later period. The plastered floor was of the same date as the altar. South of the altar, and across the three bottom steps, lay a small stone altar which from its position could have belonged only to the later temple. Beside the large altar on the east, there were four bases of other small altars, one of which still bore an inscribed altar. The three southern bases rested on the plastered floor, while the northernmost basis was a few centimetres above the floor supported on debris. The tops of these bases were on the same level, that is, a level fixed by the same floor. The floor to which the bases were leveled could not have been the plastered floor, as the northern altar did not touch this floor. It is necessary therefore to assume that the floor of the later period, the period of the small altars, was 15–20 cm. above the plastered floor. The earthen steps at the foot of the later stair indicate that the later floor was of beaten earth. As for the ramp on the north of the altar, it rested on the plastered floor, but this fact is not decisive for the date, because even the shallowest of foundations sufficed to penetrate the 15–20 cm. of earth which separated the two floors. This ramp was a rough rubble construction clearly unsuited to be a part of the Herodian temple and unfitted to withstand the weather of several centuries. It showed no trace of casing, and in fact its width with reference to the altar showed that it never was cased. My own conclusion, with which Mr. Fisher is in agreement, was that the ramp was a temporary structure built in the later period probably with the intention of mounting the statue of Augustus on the altar. The altar is cracked as if it had been subjected to the strain of a great weight. Therefore it is possible that the statue actually reached the top of the altar and fell or was taken down.

Josephus tells us in two places how Herod fortified and embellished Samaria. In the middle of the city he erected a large and splendid temple, which, with a temenos about it, three stadia and a half in circuit,<sup>1</sup> he dedicated to Augustus.

<sup>1</sup>Josephus, *Bell. Jud.* i, 21, 2; *Antt.* xv, 8, 5.—The manuscripts vary between *τριῶν ἡμιστάδιων* and *τριῶν ἡλίου σταδίων*.

Niese adopts the former reading in both places, though in *Antt.* the majority of the manuscripts support the latter.

The open space in front of the temple was evidently part of the temenos (see Plan 8).<sup>1</sup> The level place on the north and northwest is clearly marked, and beneath its level, to the west, is the subterranean corridor and vault. Opposite the vault, a stairway led up from the corridor to the surface of the temple platform. West of the corridor we found several long foundation walls, and south of it (west of the cella of the temple), a large house (the Atrium House). A street, or passage, ran between the house and the temple, and a wider street ran inside a wall with towers around the western part of the summit. South of the temple, probably with a narrow passage between, was a large apsidal building. (See Part III, p. 180.)

The Herodian buildings on the summit consisted then of the following:

1. Temple with altar. Pls. 6 c; 10 b, c, d; 11 a, b; 17 a, b; 18 a, b, c, d, e; 19 a, b; 20 a, b; 38 a, b.
2. Subterranean cellar with pillared corridor. Pls. 22 a, b, c, d; 23 a, b; 24 b, c, d, e; 38 a, b; 40 b, c.
3. Apsidal structure south of temple. Pls. 5 b; 7 a, b, c; 10 a; 16 b; 25 a, b.
4. Great wall with square towers around the edge of the summit. Pls. 28 a; 29 a; 32 b; 39 a; 41 b.
5. Houses inside the wall. Pls. 31 a, b; 32 a, d; 33 b; 34 a; 35 a; 41 a.
6. Houses on the lower terrace. Pls. 12 b; 14 a, b, d; 15 a.

#### LATEST PREHERODIAN BUILDINGS

The point of departure for the identification of the several periods before the age of Herod is fixed in the upper levels by the Herodian buildings described above. The clearest evidence was given by the blocks of debris enclosed within the foundation walls of Herod's temple in S2. (See Plan 7.) In these blocks of debris was a complex of houses (Insula IV), the walls of which remained in places to a height of 160 cm. (See Pl. 5 a.) The floors of the houses were 230 cm. below the level of the temple floor, and the house walls had been broken through by the construction trenches for the temple walls. Since there were no buildings between them and the floor of the temple, it is plain that these houses were the latest Preherodian structures on the site. They were built on terraces descending towards the west, and were characterized by a good type of masonry and by cemented bath (?) basins and large subterranean cisterns (see Part III, p. 134ff). This complex was bounded on the north and east by streets.

The northern side of the northern street (Beta) had been destroyed in the construction of the temple stairway; and all the houses on the northern side of the street in S6 (Insula II) had been swept away by the great clearing operations preparatory to the construction of the temple (see p. 90). The only thing that remained here was the rock cistern, S6 cistern 1 (see Pl. 19 b), found packed hard with earth. West of this, in S9, a second complex was found, bounded on the south by the vault and on the west by the subterranean corridor (see Pl. 23 c). In the vault and the corridor the only remains of this period were three cisterns.

The dimensions of the open area about the temple as determined by the expedition (roughly, 500 metres in circuit) are much closer to three and a half stadia than to one and a half; and inasmuch as Josephus' source here is doubtless

Nicolaus of Damascus, Herod's court historian, it is to be presumed that these figures were approximately correct. [Ed.]

<sup>1</sup>It is doubtful whether an enclosing wall may be assumed, as was done in our Preliminary Report (unpublished).

The eastern side of the eastern street (Gamma) in S1 had also disappeared, except for some pieces of walls (under a bath-house, see Plan 7) and some cisterns. The terrace on this side (Insula V) had been cleared away when the bath-house was built.

On the south the destruction of the temple itself and the modern agricultural terracing had swept away the greater part of the Preherodian town; but south of the southern wall of the temple, in the middle of the structure with the apse, there was a cemented bath-basin, belonging no doubt to the Preherodian town. (See Pl. 7 b.) On the southern edge of S2 the destruction caused by the erection of the apsidal building was complete. Still further south, in L. T. 5, there was a clearly marked street (Lambda) running east and west, passing under the corner of the apsidal building. This street was lined on the south by a complex of well-preserved houses built in terraces, above which stood the houses of the Herodian-Roman period. They were set parallel to the street, while the later houses were parallel to the lines of the apsidal building and the temple. It is probable that the eastern street (Gamma) of the block in S2 led down by a flight of steps or a slope to the street in L. T. One of the houses in the L. T. block had a stairway which may have opened into the street above. (See Plan 7, rooms 61, 64; and Pl. 14 c.)

The L. T. street (Lambda) and the houses on its southern side extended westward into S3 and S5; but the houses north of the street, which must have been somewhat higher than the street, had been destroyed from the street as far as the Greek Fort Wall. At the western end of S5 the street appeared to turn northwards, or rather to open into another street running northwards, leading past some pieces of walls built on debris overlying the Greek Fort Wall, but below the Roman level, as shown by the Roman Fort Wall.

West of the temple, also, in S4, S7, and S8, the Preherodian buildings had been swept away by the Herodian constructions. But a street was found, running north and south, and on each side of it remains of Preherodian houses. In S4-201 the floor of the Preherodian house was found intact; and in the Atrium House the cistern S7 No. 1 was found with its canal and its mouth just under the intact Roman floor.

The coherence of these buildings was evident. It was also plain that they had been greatly affected by the building operations of the Herodian period. They had been in part swept away, and in part filled up with debris. The age of the buildings themselves was, however, not so clear. It was possible that they formed part of the Seleucid town destroyed by John Hyrcanus in, or shortly before, 107 B.C., or of the town built at the time when Gabinius is said to have restored the city (57-55 B.C.). Against the former hypothesis might be adduced the account of the demolition of Samaria by Hyrcanus in Josephus (Antt. xiii, 10, 3), according to which Hyrcanus wiped the city out, leaving no sign that it had ever existed. Such rhetorical assertions are, however, always subject to suspicion of exaggeration; and we did not feel warranted in excluding the hypothesis *a limine*.<sup>1</sup>

That the rooms in the houses were found empty could be explained in either case. In the one case, we might suppose that the houses were stripped by an army

<sup>1</sup>Only a singular misinterpretation imputes to Josephus the absurdity of saying that Hyrcanus accomplished the total

destruction of the city by turning on it streams of water--which he must have persuaded to run up hill--and washing



of looters when Hyrcanus took the Seleucid city; in the other, that they were cleared by their occupants when Herod confiscated the site for his temple. The question could not be decided by the objects found in the debris piled into the houses, since this filling was done by Herod's workmen. Objects found immediately on the mud floors, and especially in the thin layer of debris of occupation, must, of course, come from the time when the houses were inhabited; but these objects were very few, and the decision finally rested upon the objects found in the debris under the floors. The houses cannot be earlier in date than the latest object found under the intact floors. The debris piled into the houses and the cisterns must have come from the destruction of the houses in front of the temple and around it, and ought, except for chance intrusions, to exhibit the same range of coins as is exhibited by the debris found under the floors.

The coins found beneath the intact floors of the houses under discussion were not numerous, and many of them were badly preserved. The list of legible coins is as follows:

Ptolemy II, Philadelphus, 285/4-246 B.C.,	Reg. No. 1599, S2 III 33 sub.
Ptolemy III, Euergetes, 246-221 B.C.,	" " 1565, S2 III 44 sub.
	" " 4819, S2 III 70 sub.
Antiochus IV, Epiphanes, 175-164 B.C.,	" " 4818, S2 III 69 sub.
Antiochia ad Orontem, 1st Cent. B.C.,	" " 4769, S2 III 65 sub.
	" " 4837, S2 III 68 sub.
Dora, 64-63 B.C.	" " 1600, S2 III 27 sub.
Maccabæan, star and anchor type, 78-40 B.C.,	" " 4839, S2 III 67 sub.

Thus there were found beneath the intact Preherodian floors under the temple portico four coins of the early part of the First Century before Christ.

This evidence was confirmed by the coins found under the floors in other spots. In S4, room 201 (Plan 7, F 12), a collection of twenty-three coins was found in one place under the floor, probably buried for safe-keeping in a hole through the floor. One of these was a silver coin of Antiochus VII, Sidetes, 138-129 B.C. (Reg. No. 3652). The rest were all Tyrian autonomous coins of the First Century B.C. (Reg. Nos. 3653-3674). In S3-306 and 367 three autonomous city coins (Reg. Nos. 2436, 2481, 2455) and one Maccabæan coin (Reg. No. 2485) were found under the street level. In S3-324 sub, a coin of Tyre (Reg. No. 2517) was found.

The coins found in the debris piled into the houses show the same range of Ptolemaic, Seleucidan, Autonomous, and Maccabæan coins as those found under the floors:

Ptolemy IV, Philopator, 221-204 B.C.,	Reg. No. 3119, S2 III 67.
Antiochus III, 223-187 B.C.,	" " 1563, S2 III 40.
Antiochus VII, Sidetes, 138-129 B.C.,	" " 2561, S2 III 64.
	" " 3085, S2 III 68.
Tyre, autonomous, 1st Cent. B.C.,	" " 1561, S2 III 40.
	" " 1553, S2 III 55.
	" " 3120, S2 III 66.

it away. A modern variation of this misinterpretation is the translation of George Adam Smith: "He destroyed it utterly, and brought streams to drown it, for he made such excavations as might let the waters run under it," etc. (Historical Geography of the Holy Land, 1894, p. 347, n. 6.)

What Josephus says is that Hyrcanus "completely wiped out the city, exposing it to the washing of the winter torrents; for, breaching it so that it fell in confused ruins into the gullies, he destroyed all signs that a city had existed." [Ed.]

Antiochia ad Orontem, 1st Cent. B.C.,	Reg. No. 4746, S2 III 68.
	" " 4747, S2 III 68.
	" " 3082, S2 III 67.
Maccabæan, 78-40 B.C.,	" " 1562, S2 III 40.
	" " 1690-1, S2 III 63.
	" " 3112-5, S2 III 69.

This fact is fully explained by the theory that the temple site was filled up within the foundation walls with debris made by clearing away the surrounding houses.

The strongest possible confirmation was given by the two cisterns in the vault on the west of the temple stair. This vault was built over Israelite and other walls against an artificial rock face of undoubtedly Israelite origin (see Pls. 23 b; 24 a). There was a hard floor of packed debris, which contained a Maccabæan coin of star and anchor type (Reg. No. 2562). Under this floor were two cisterns. Cistern No. 1, in the southeastern corner, had no shaft at all, having been cut down flush with the rock. Of cistern No. 2 the lower part of the shaft remained, having been cut down level with the Herodian floor. Both had been filled with debris at the time the vault was first built. Vault cistern 2 contained the following significant series of coins:

Ptolemy II, 285-247 B.C.,	Reg. No. 1777, 1752.
Antiochus III, 223-187 B.C.,	" " 1753.
Antiochus IV, 175-164 B.C.,	" " 1785.
Demetrius II (first reign), 146-138 B.C.,	" " 1767.
Antiochus VII, 138-129 B.C.,	" " 1729, 1751, 1784, 2570.
Alexander II, 128-122 B.C.,	" " 2564, 2567.
Antiochus IX, 113-95 B.C.,	" " 1728.
Tyre, autonomous, 1st Cent. B.C.,	" " 1715.
Tripolis, 83 (?) B.C.,	" " 1783.
Ptolemais-Ake, 43-39 B.C.,	" " 1750, 1766.
Demetrias, 40 (?) B.C.,	" " 2565.
Maccabæan, star and anchor type, 78-40 B.C.,	Reg. Nos. 1721, 1722, 1725-7, 1737, 1742,
	1745, 1754-8, 1768-1775, 1778, 1786-9, 1794.

Vault cistern 1 had been partially cleared in 1908, but we found in 1909 the following coins:

Tyre, autonomous, 1st Cent. B.C.,	Reg. Nos. 1802, 1803.
Ptolemais-Ake, 43 B.C.,	Reg. No. 1801.
Maccabæan, star and anchor type,	Reg. Nos. 1790-1793, 1806-1809, 1812, 2566.

Thus, when the temple site was cleared and these cisterns filled, the filling came from demolished houses and terraces in which were coins ranging from the time of Ptolemy II to that of Herod. It is clear from the number of coins of the First Century B.C. that Samaria was an inhabited town when Herod built the temple. The absence of coins later in date than 39 B.C. makes it probable that the temple was built soon after that date.

To sum up, at the time the temple was built the site was occupied by an inhabited town. The temple was planned to stand high above the houses on the hill, with its floor 230 cm. above the existing house-floors. Its substructure walls

were built in trenches which cut through the existing houses and underlying debris to the rock or to the massive Israelite walls. The space within these walls was then filled with debris (probably taken for the most part from S6) up to the level of the proposed floor. The town which stood on the site, upon the evidence of the coins under the floors, was not built before 78 B.C., and, according to the coins in the floors, was not inhabited very long after 39 B.C. The inference is that these last Preherodian buildings belong to a town built either when Gabinius restored Samaria (57-55 B.C.), or possibly even when Herod himself first ordered the rebuilding of the town. On account of the abundance of the remains and the evidences of reconstruction in the walls, it seems to me probable that the town dates from the time of Gabinius.

#### SELEUCIDAN AND OTHER GREEK REMAINS

The latest Preherodian town presents the last coherent series of buildings until we reach the first Post-Israelite period. One might even doubt that the hill had been inhabited except for the accumulation of black debris over the Israelite walls and for the objects found in this debris. The mistake has often been made of attempting to judge the lapse of time by the depth of the debris, on the assumption that the debris has accumulated at a fixed rate through a long period. The fallacy of this assumption is easily demonstrated by known cases of the accumulation of debris. Nevertheless, a mass of debris does not grow of itself. It represents something—an act of destruction, slow weathering, or some great work of construction. For example, the two metres of debris between the temple floor and the latest Preherodian floor was produced not gradually by the slow work of time, but all at once by the great building operations of Herod. Therefore the heavy deposits of black debris on the summit are not without significance. There is no trace of any great building on the site between the Herodian and the Israelite periods; and it is therefore probable that the debris comes from a long period of occupation, during which inhabited houses fell into decay, and were rebuilt over and over again. This is the usual history of an Oriental town.

The objects contained in the black debris, at a minimum estimate of their age, show that the place was inhabited from before 400 B.C. down to about 100 B.C. The most important evidence is that of the Greek pottery and the coins. The catalogue of Greek coins found at Samaria is given in Part IV, Chap. II (p. 254 ff). From this list it will be seen that there were found an Athenian silver coin of the Fifth Century and a bronze coin of Alexander, of about 330 B.C.; but, as it chanced, no other coins which could be dated earlier than 300 B.C. About 300 B.C., Palestine came under the rule of the Ptolemies, and the coins of the Third Century which came from this stratum of debris are with few exceptions Ptolemaic.<sup>1</sup> Antiochus III conquered Palestine about 200 B.C., and, as might be expected, the coins of the Second Century B.C. are Seleucidan, with the exception of the autonomous coinage of Ptolemais-Ake. The number and range of these coins prove that the city was

<sup>1</sup>One of Antiochus I, and one of Aradus (208 B.C.). See p. 254 ff., Catalogue of Coins.

continuously inhabited during the Second and Third Centuries B.C. The few older coins found suggest that it was inhabited much earlier, but they are not by themselves sufficient to prove this. The evidence furnished by the potsherds is considerably stronger. See pp. 281-283<sup>1</sup>, where the early Greek potsherds are described. Among these are the meander-pattern bowl (No. 1), four fragments of rosette-pattern bowls (Nos. 2 a-d), and three fragments of red burnished ware with black concentric circles (Nos. 3 a-c), all probably of Cypriote origin and of the Fifth Century B.C.—possibly older. Two fragments of black-figured ware (Nos. 4 a, b), probably of about 500 B.C., were found. Of the red-figured ware, one practically complete bell-krater was found, besides eighteen fragments showing figures or parts of figures, and eight showing parts of patterns.

These fragments are all to be dated, so far as their manufacture is concerned, before 400 B.C. Although they may have continued in use for some time after they were made, none of the pieces shows signs of much wear, and the natural life of pottery vessels is not long. It seems to me, therefore, impossible that the Greek vessels from which these fragments come were imported after 331 B.C. by Alexander's Macedonian colony; it is far more likely that they were imported earlier in the century, perhaps as early as the end of the Fifth Century, for the use of the native inhabitants.

Besides the earlier Greek pottery described above, a great many fragments of black-glazed vessels were found in every part of the site, of the same ware as the red-figured vessels of the cylix and handled-bowl shapes. A number of fragments of lekythi were also found (see p. 288, No. 12, and Fig. 164); but these all have the tongue pattern on the shoulder, and belong to the last group of white-ground lekythi, which are not earlier than about 350 B.C.<sup>2</sup>

The pottery of the Hellenistic period proper was found in abundance all over the site. Under this term I include the Rhodian wine amphoræ, which began to be exported about 300 B.C. (see Part IV, Chap. IV, p. 310 ff.), the Megarian bowls, the black-glazed and red-glazed wares, and the coarser wares described in Part IV, Chapter III, Hellenistic Pottery.

Thus the combined evidence of the pottery and the coins found in the black debris indicates that the site was continuously occupied by a considerable population from before 400 B.C. to about 100 B.C., and was probably inhabited before 500 B.C.

The inscriptions found were few in number and the two dated ones were not found in significant positions. A limestone slab (Pl. 59 a, Reg. No. 2046) was in the summit dump and probably came from the trench cut through the middle of the temple in 1908 (i.e., from the filling of the Preherodian houses in Insula IV). The text appeared to be part of a decree in the name of King Demetrius, but the name Demetrius was written over an erasure. Thus the decree was an older one, re-issued in the name of Demetrius. The latest date for the re-issue would be 130-125 B.C., and the earliest, 162-151 B.C. The second dated inscription (Pl. 59 b, Reg. No.

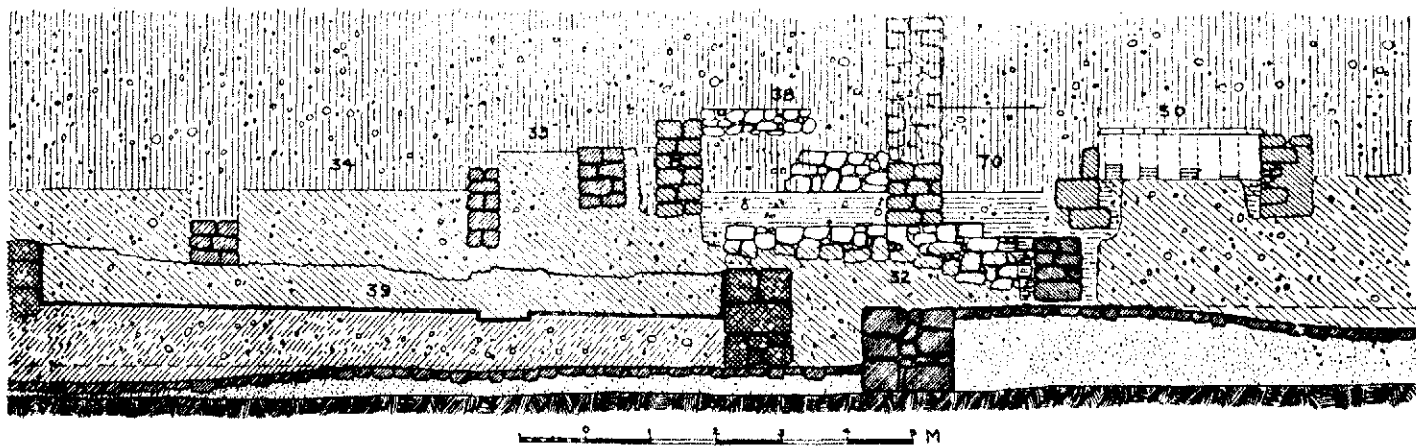
<sup>1</sup>Most of the material under III, p. 281 ff., belongs under B, p. 284 ff., as was suspected (p. 275 note) but was not clear when it was assigned to its present position in this book.

<sup>2</sup>See Walters, *History of Ancient Pottery*, I, 462.

4731) was a marble molding, or architrave, found in the debris in the subterranean corridor. It was dated in the year 160, probably 160 of the Seleucid era, or 152 B.C. (i.e., reign of Demetrius I). These inscriptions, therefore, serve to confirm the evidence of the coins.

As has been said above, this town has left no coherent remains. On Plan 7 the scattered walls which belong to this period are distinguished by shading (Plan 7 JK 11-14, CD 15-16, and FG 17-18). A few of the disconnected walls in S4 and S7 may also be earlier than the Preherodian period. The largest single set of walls are those in S1 (JK 11-14), one of which, room 36, was a tower, but this complex may be earlier, perhaps of the same date as the Osorkon House. But the fortifications of the town are well preserved, and largely account for the configuration of the hill from the Fourth Century B.C. to the present day. These are the walls—an upper, enclosing the summit, and a lower, surrounding the whole site—which in the preliminary report of 1910 were provisionally called the "Babylonian Wall." Their origin lies almost certainly in the earliest Post-Israelite period; but, inasmuch as they formed the basis of all the fortifications of the Greek period, they have been called in this report the "Greek Fort Walls."

At the Gateway the Greek Fort Wall passes over the Israelite tower and under the Herodian city walls (see Plan 10). Its relation to the square Greek tower is hidden by the mass of the Herodian wall and tower,—a mass which we did not feel at liberty to remove. There were, however, two other sets of walls at this point, interposed between the Greek Fort Wall and the Herodian wall. The later of these two intermediate walls was a rather weak wall, with a square bastion covering the approach by the old road (shaded blue on Plan 10), and probably represents a temporary fortification built by Gabinius or Herod. The earlier (blue on Plan 10) was a substantial wall, with a round tower or bastion, built just outside the earlier Greek Fort Wall, and for convenience is here designated as the Hellenistic Fort Wall. The square tower under the Herodian round tower was part of this Hellenistic fortification.

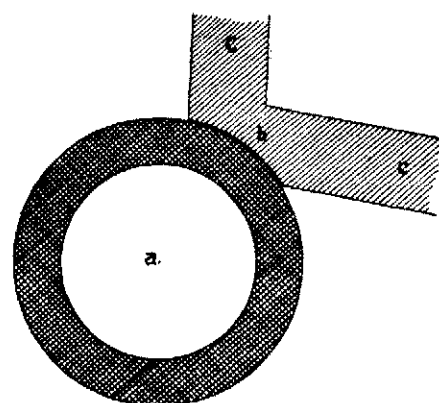


10. E-W section through L. T. 3, looking north. From below: rock, rubble pavement, floor 39, floor 32, floor 34 (Preherodian), floor 33 (Herodian), floors 38, 70, 50 (Severan).

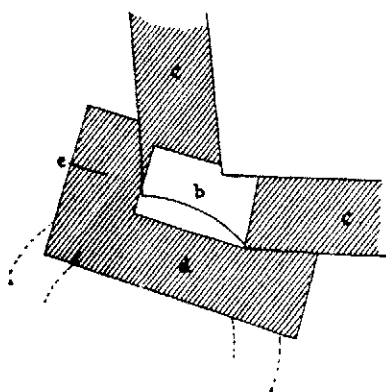
Now, the ground outside the Hellenistic fortification at the Gateway was paved with rubble extending up to the face of the wall. An exactly similar rubble pavement was found on the south of the summit in L. T. 2 and 3 outside the Greek Fort Wall. (See Fig. 10, and Pls. 12 b; 13 c; 15 a; 16 a.) The L. T. pavement was built

against both sides of an unattached piece of heavy wall running north, and rested on a thin bed of black earth overlying the Israelite yellow debris. It was covered with a layer (20–40 cm. thick) of black carbon dust and ashes. Above it were remains of walls (L. T. 39, cemented room) which were older than the latest Preherodian houses (L. T. 32 and 34). Thus it is clear that the rubble pavement and the fortification wall to which it belongs are Hellenistic in date, while the Greek Fort Wall is still older.

An examination of the Greek Fort Wall shows that it has been repaired more than once. It was originally built in a construction trench about 30 cm. wider than the wall. Along the western side, the wall was laid out parallel to the Israelite walls of Jeroboam II, and partly over them. The stones from the Israelite walls were removed and used again in the lower courses of the Fort Wall, and in S8 the construction trench was enlarged eastwards to a width of 120 cm., in order to uncover one of these Israelite walls and permit the removal of its stones. What is preserved of the Fort Wall is no more than a substructure, as is evident from the construction trenches (see Fig. 8, p. 41) and from the easily scaled step form of the faces of the wall. The trenches, whose opening was, of course, at the living surface of the period, now extend from the rock upwards nearly to the top of the remaining wall. The superstructure wall was probably a vertically faced wall on top of the existing substructure. Nevertheless, the sloping outside face of the latter must have been partly exposed at certain points, as north of the Gateway, where even the Hellenistic floor (the rubble pavement) is lower than the top of the wall, and in S10. In breaching, the attack would naturally be made on the superstructure wall; but in mining, the foundation wall would be attacked. The two places which show the greatest alterations, probably due to such attacks, are the middle western bastion at the summit, and especially the SW bastion in S5. Figs. 11 and 12 show the earlier SW corner and the later protecting tower or bastion (see Pls. 29–30). Fig. 50 (p. 124) shows the great tower built in behind the middle western bastion, cutting into the wall itself (see Pl. 39 c).



11. Older SW bastion in S5, built around Israelite tower. Scale, 1:400.



12. Reconstructed SW bastion in S5. Scale, 1:400.

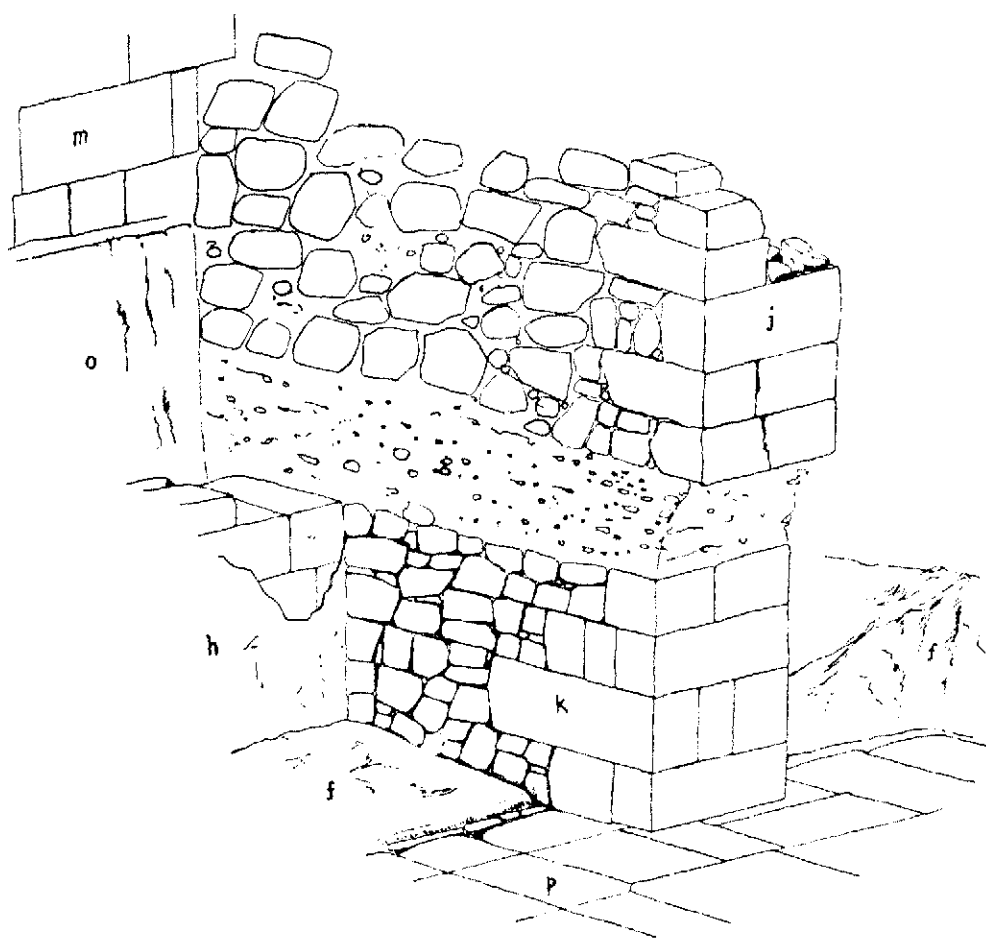
There was, therefore, from the Fifth Century B.C. to the First, a prosperous town on the hill, surrounded by a strong wall, with a second equally strong wall fortifying the hilltop. The only traces of large buildings were found in the heavy walls under the Basilica and possibly in the thick walls in S1. Except for the House in S1 and a few scattered walls, the dwellings of a series of towns have disappeared. The last of these towns must have been destroyed, as the coins indicate, previous to 100 B.C.; and I feel compelled to assume that the demolition of the Seleucid town by John Hyrcanus about 107 B.C. was substantially as complete as it is

described by Josephus. It must be remembered that whatever ruins were left by Hyrcanus would have been cleared away by the building operations of Gabinius. Terraces were made, sound stones were re-used, and the underlying deposits were cut by foundation trenches. The same processes of demolition and construction account, no doubt, for the disappearance of the greater part of the house walls of the Greek towns of earlier date. The period was one of almost continual warfare, and the fragmentary character of its remains at Samaria is in accord with our knowledge of the conditions of the times.

#### EARLY POST ISRAELITE REMAINS

The clearest evidence of an occupation of the site soon after the destruction of Samaria by Sargon in 722 B.C. is a series of walls found in S2, S4, S7, S8, and S11,

which are built immediately over the ruined Israelite walls, and run in nearly the same direction, but show a different plan. In S2 IV 13 (see Plan 5 and Pl. 8 c, d), one of these walls crosses the floor of a room of the palace of Ahab, and was built after the partial destruction of the room. The walls of the room were completely destroyed, as would be the case if the later walls were a restoration. Just west of this later wall there is a small complex of walls (776) crossing the western face of the



13. S2 IV 13.—o, Omri scarp; m, Omri wall; h, Ahab wall; p, Ahab floor; k, Post-Israelite wall; g, debris; j, Greek wall; f, rock surface.

Ahab palace, with a floor-level above that of the palace courtyard. (See Plan 6 FG 10-12 and Pls. 11 a; 33 c; 34 d.) In the southern part of the main Ahab palace (Plans 3 and 5 FG 13-14), the rooms 81, 82, and 83 were built with stones from the Israelite walls after the destruction of the Ahab palace. The southern wall of 83 was against an Ahab foundation wall, and the eastern wall of 81 and 83 was against the Omri rock scarp. The top of the S wall of 81 was 435.83 m. above sea-level (see p. 93, n. 1); the lowest wall in 82 rose over 2 m. above rock. None of the walls showed a floor-level or a doorway, but the situation of 83 demanded a floor-level higher than 434 m. in order to clear the scarp and the wall against which its



walls were built. The floor of the cellar room, 13, was at 432.60 m., and that of room 14 was 435.74 m. It seems probable, therefore, that the rooms 81-83 had floors corresponding in level with the floor of room 14 (i.e., 435.74 m.).

The Osorkon House probably belongs to this same period. Although it shows a different type of masonry, it is orientated like the Israelite buildings, and is separated by a regular passage, 3 m. wide, from the early Post-Israelite chambers (706) west of it against the Greek Fort Wall. (See Pl. 37 b.) The doorway in the northern wall of the Osorkon House gives us 434.88 m. as the height of the floor. This is nearly a metre under the floor-level of room 14 in S2, but the difference may be explained by the fall of the rock and of the Israelite deposits in this direction. (See Pl. 37 b.) West of the Osorkon House, the set of walls (706), just mentioned, show both the required masonry and the orientation; they cross the bare rock-cut scarp of Ahab's palace, and abut on a fragment of the palace of Jeroboam II. (See Pl. 36 b.) Further north, in S8 (see Pls. 39 b; 40 d, e) and in S11 (see Pls. 41 a; 54 e), similar well-built walls were found crossing the Israelite wall. All these walls are parallel to the Greek Fort Wall on the west, and appear to have had floors at about the same level as the floor of the Fort Wall. In fact, the walls of the westernmost complex in S7 extended to the Fort Wall and were actually built against it. (See Plan 6.) In other words, the first Post-Israelite buildings are apparently contemporaneous with the fortification which underlies the Greek Fort Wall.

In S6 and S9 (Plan 2 EFGH 4-7, purple; Pls. 21 a and 23 d), a series of walls presented a general similarity to the walls of the Osorkon House. The orientation of the thick wall in FGH 4 was nearly the same as that of the early blue walls in HJK 12-14; but that of the other walls approaches the orientation of the complex 776 in F 10-11. All these walls were under house walls of the last Preherodian period, and over Israelite remains. The earth in the rooms was disturbed yellow debris containing Israelite and Post-Israelite pottery (as in S1 cist. 7). Nevertheless, the identification of these walls with the early Post-Israelite period remains open to question.

On Plan 6 the course of the Greek Fort Wall may be traced around the summit. The early Post-Israelite wall forms without doubt the basis of this wall. In fact, except for the numerous repairs and reconstructions, the Greek Fort Wall is the early Post-Israelite wall. Wherever unrepaired parts of the latter were certainly recognizable, as in the eastern parts of S2 and in S3, the narrow construction trench through Israelite debris was a characteristic feature. Where repairs had been made, there was a broad excavation, the limits of which could not always be ascertained (as at the SW bastion). In the original narrow construction trenches, with the exception of the fragments of a cuneiform tablet (Reg. No. 1825) found in S2 east (H. S. 1), only Israelite potsherds were found. This confirms in the strongest manner the conclusion that the wall in question was built in the earliest Post-Israelite period. In the places where the wall had been repaired, the adjacent debris showed an abundance of Hellenistic objects, but nothing later than 100 B.C. The wall was not in use during the last Preherodian period, as in S5 some of the houses of that period were built over the wall, with intervening debris. It continued, how-



ever, to give the hill its configuration, and so determined roughly the lines of the Herodian enclosing walls. (See Plans 1 and 8.)

In all probability, therefore, soon after the destruction of the palace, the site of Samaria was reoccupied, presumably by the alien colonists whom the Assyrian kings deported thither (2 Kings xvii, 24). The new inhabitants fortified the city with a strong wall of circumvallation half way down the hill and an inner, citadel wall, enclosing the summit. Of the history of the place from the Seventh to the Fourth Century B.C. almost nothing is known. Alexander captured Samaria in 331 B.C., punished its people for the murder of his governor, and brought in Macedonian colonists, but there is no intimation that he destroyed the city. Eusebius mentions a restoration by Perdikkas (before 321 B.C.). In the wars of the Diadochi in the next half century Samaria more than once suffered severely; Ptolemæus Lagi is said to have demolished its fortifications when he retired from Syria before Antigonus, and Demetrius Poliorcetes ravaged it. But through these vicissitudes, with substantially the same topographical features, the Hellenistic Samaria survived till its destruction by John Hyrcanus.

#### ISRAELITE BUILDINGS

The identification of the Israelite buildings, when once the rock was reached, was a comparatively easy matter. Throughout the whole of the excavated area at the summit the rock was covered with a maze of ruined walls of excellent, massive masonry, forming part of a building of royal size. This was the earliest building on the site. The rock had been dressed to take the lines of its walls, and all the spaces within the walls were covered with a light layer of clean mason's debris. Much of the rock had been scarred by the quarrying which yielded the stone used in the building. Where the rock was not disturbed by the building operations, its surface bore the channels and cup marks found on bare rock all over Palestine. In some cases the walls were built over these marks. (See Pls. 3 b; 4 d.) The floors of the building were nowhere far from the rock. They were preserved in rooms 12 (door-sill) and 13, and in the courtyard. It is clear that the rock was at least partly bare when the palace was begun, and, as far as the present excavations have extended, it was everywhere stripped for quarrying and building.

Thus the earliest building on the crest of the hill, the primary building site, was of royal size and construction, and must have been built during the early possession of the hill by the Israelite kings. So much was plain at the end of 1909; but complete proof was furnished in 1910 by the Osorkon jar (see p. 81), the Israelite ostraca (see p. 63), the pottery, scarabs, and other objects found on the living floor of the courtyard. All these showed, beyond question, that the building was occupied during the Ninth Century B.C. To judge from its plan, situation, size, and strength, the building was almost certainly a palace rather than a temple, and, although absolute proof of this was not forthcoming, it is, throughout this volume, called the Israelite Palace.

The Israelite Palace consisted of three distinct structures, the chronological succession of which was clearly marked by their relative positions. These are ascribed provisionally to Omri, Ahab, and Jeroboam II, respectively.

The oldest part, the core structure, was built on a pinnacle of rock made by cutting away the sides of the hill to form an artificial scarp from one to two metres high all around the summit. (See Plan 5.) The stones of the outer wall were laid from ten to fifteen centimetres back from this artificial face in a shallow trench cut in the rock. (See Pls. 8 c, d; 11 a.) The building-stones are of the same limestone as the rock itself, and appear to have come, in part at least, from the material cut away in making the pinnacle. Similar stones were found in S2 and L. T. E., isolated by channels on all sides, but not yet loosened from the mother rock (see Fig. 1, p. 37). The stones are roughly dressed, massive blocks, and the walls are thick and heavy (see Figs. 22, 23, pp. 97, 98). How far this first palace extended to the east is at present undetermined, but the limits on the north, west, and south are marked on Plan 5. It is assigned to Omri, because it is the earliest of the three structures constituting the Israelite Palace.

Built against the core structure, and enveloping it on the north, west, and south, was a second building, far more extensive in plan and of finer construction. (See Pl. 8 c, d.) This was naturally identified with the "ivory palace" of Ahab, and the smoothly dressed surfaces, now weathered yellow, are sufficient justification for this name. The palace of Ahab consisted of three parts: first, the palace proper, the western face of which may be seen in Plan 5, F 9-14; second, three wings, of which the west wing was a great open court surrounded by a wall lined with small rooms (Plan 5, FGH 4; E 4, 5; D 5; C 5-15; CDEF 14-15); and, third, a great square tower (FG 15-16). The palace proper had suffered greatly by the removal of building stone, probably during the first Post-Israelite period; certain parts (FGH 9-11) were covered by the walls of the Herodian temple; and the whole northern wing (FGHI 6-9) had been swept away by the clearing operations which preceded the construction of that temple. (See Pl. 19 b.) The floor-level was indicated by the thresholds of rooms 11 and 12 (GH 11), at a lower level than the foot of the Omri wall; but room 13 had a stone-paved floor 300 cm. lower than the threshold of room 11. An isolated pavement stone in the space south of room 13 indicated that the next room south was also stone-paved, but at a level 70 cm. above the floor of room 13. Such variations in level based on structural peculiarities are, however, not uncommon in Oriental buildings.

The most singular feature about this inner part of the palace of Ahab was room 12 and the rock cave opening into it. The door from room 11 into room 12 was so carefully blocked with masonry like that of the adjacent walls that it did not appear at first glance. (See Fig. 24 and Pl. 8 a.) On the inside of room 12 this door-block was left rough; that is, it had been built up from the side of room 11, and left closed, thus making of 12 a walled-up room. From room 12 a trench, a long cut in the rock, roofed with stone slabs to form a tunnel only about 80 cm. high, led into a great square rock-cut chamber (S1 cistern 7). The Herodian workmen, in seeking rock for the foundation of the temple, had broken

through the roof of the tunnel, and begun their wall on its floor, securely blocking the entrance to the cave. We first came on the cave in S1 through a round hole cut in the roof a little NE of the middle. This hole was under the earliest Greek walls found in S1 (see Pl. 4 c), and was assumed to lead to an ordinary cistern, and so numbered (cistern 7). On entering the chamber, it was found to contain as large a conical pile of debris as could be thrown into it from the mouth (see Fig. 7). This debris contained the following objects:

Eight potsherds, with inscriptions in black ink, very faint and hard to read, owing to the moisture which drained into the cave from above. (See Pl. 58.) The characters resemble the middle Aramaic of the Persian period. See Lidzbarski, *Handbuch der Nordsemitischen Epigraphik*, II Teil, Pl. XLV, the last five columns of the Aramaic alphabet. Reg. Nos. 1524–1531, see p. 247 f.

A similar potsherd, with a ligature of two letters repeated, Reg. No. 1532. See Pl. 58 i, and p. 248.

A similar potsherd, with squares made of black lines crossing at right angles, Reg. No. 1533. See Pl. 58 j, and p. 248.

Three bone spatulae or styli, Reg. Nos. 1534–1536. See p. 372 b.

One bone piercer, Reg. No. 1537. See p. 372 I 1 a.

One bronze cosmetic spoon, Reg. No. 1538. See Pl. 66 a, and p. 360, 13, a.

One bronze kohl-stick, Reg. No. 1540. See Pl. 66 a, and p. 360, 10, a.

One bronze chisel, Reg. No. 1539. See Pl. 66 a, and p. 354 III 1 a.

One iron point, Reg. No. 1541. See Pl. 66 a, and p. 348, 11, e.

One carved bone, end of leg bone of sheep, Reg. No. 1542. See Pl. 66 c 4, and p. 368 B 1 a.

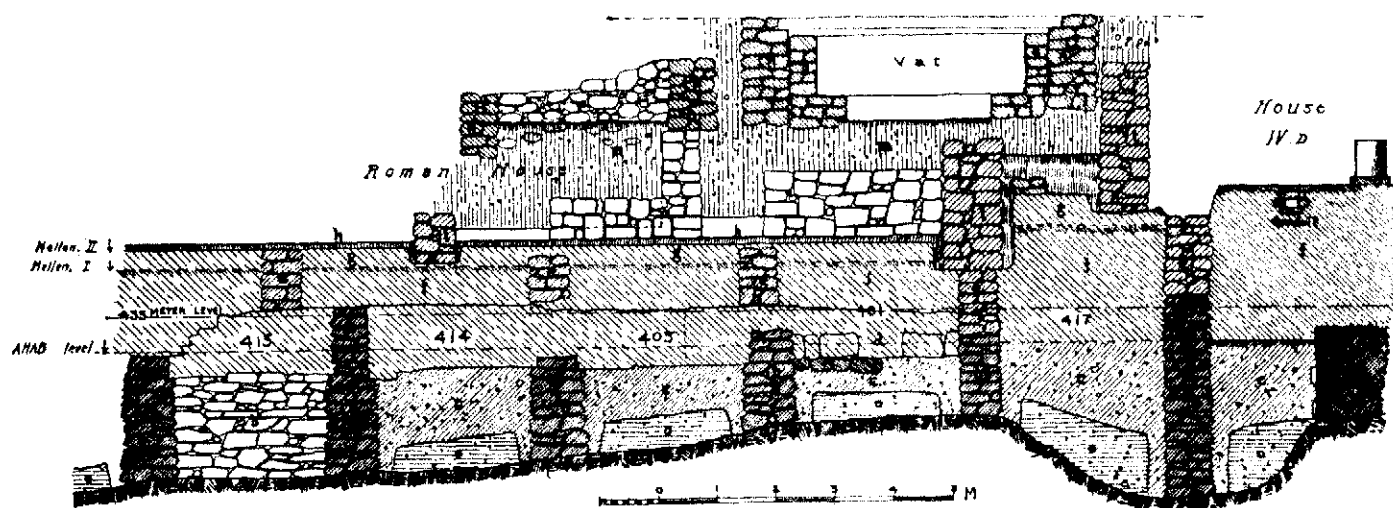
Over a hundred dressed or split bones of domestic animals (sheep, goat, cow, swine). Leg bones, jaw bones, vertebrae, ribs, pelvic bones, scapulae, tusks, and horns. Reg. Nos. 1543–1545. See Pl. 66 b, c, d, and p. 368 B 1 a.

A number of potsherds (see Pl. 65, and pp. 290–293, where these potsherds are described in detail), including Greek black-glazed red paste fabrics, and one fragment of a Greek red-figured krater (Babylonio-Grecian Pottery, III 7 i, p. 288).

Thus the debris of this chamber contained Greek pottery ranging in date from the Sixth to the Fourth Century B.C., Palestinian pottery, and potsherds with Aramaic inscriptions; but no object which was necessarily later than 300 B.C. It could not be determined whether the opening was ancient or made accidentally in an attempt to dig a cistern. In any case, it had been filled before the construction of the Hellenistic and Preherodian houses in S1, and after the destruction of the palaces. The walls of the chamber had been dressed, although the hole may have been originally one of the many natural caves found in the hill. It is clear from the carefully constructed entrance that the room served some purpose in the palace of Ahab, but had been either withdrawn from use or set apart for some secret use, perhaps a treasure chamber or, less probably, a prison.

The courtyard in the west wing of Ahab's palace yielded the most interesting material found on the whole site. The face of the western wall of the palace proper was dressed to a certain line about 20 to 100 cm. above the rock. Below this line it was left rough. Level with the line was a hard, trodden surface, or floor, extending westwards through sections DEF 12, 13, 14 of Plan 5. This floor was 10–40 cm. thick, an accumulation of fine black debris such as is laid down by the occupation of earth-floored courtyards, representing, perhaps, a considerable period of time.

In this debris were found the Israelite ostraca, the Osorkon vase, the scarab (Reg. No. 3715), the ivory handle with the *uraeus*, the ivory dagger handle carved like a lion's head (Reg. No. 3862), and an abundance of Israelite potsherds. Below the floor the courtyard had been filled in with debris consisting partly of surface earth and partly of mason's debris, the whole being dirty yellow in color. It contained a few small potsherds of Israelite character. This filling was 20 to 100 cm. deep,



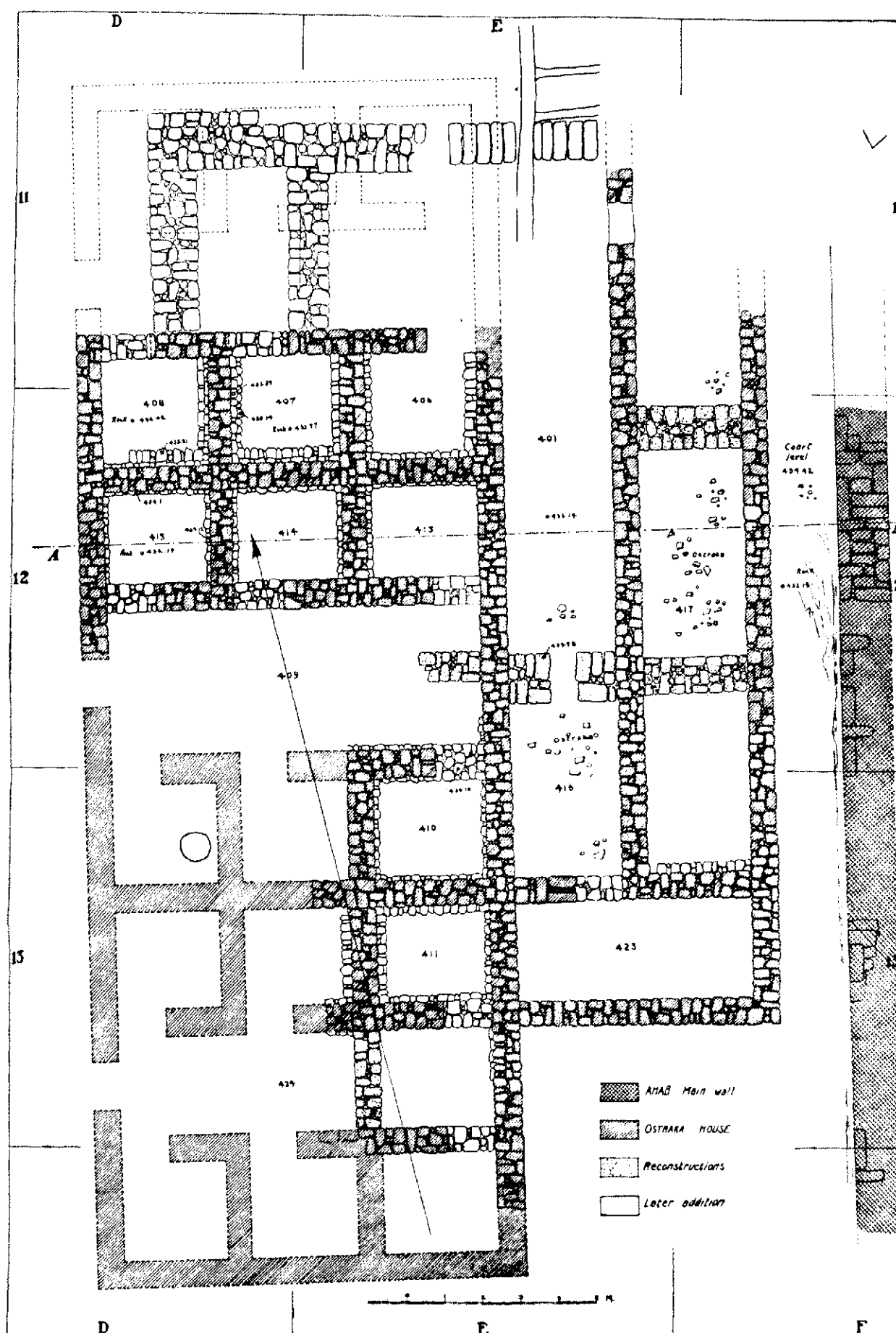
14. E-W section through S4E: a, western face of main building of Ahab; b, walls of the Ostraca House; o, mason's debris on rock; c, filling of Ahab's courtyard; d, reconstruction of the Ostraca House; e, Greek or Hellenistic walls; f, double layer of debris, the lower part of which was disturbed Israelite debris; g, two Preherodian floors just beneath h, which was the floor of the Herodian Atrium House; i, boundary walls of a Herodian street; m, debris in Atrium House; n and s, walls of the period of Severus.

increasing in depth as the rock fell away to the west and south. Under the filling, and on the rock itself, there was a layer of clean yellow mason's debris from 10 to 40 cm. thick, with a trodden surface. The courtyard contained a series of roughly built rooms, perhaps magazines or store-rooms, the walls of which pierced through the mason's debris, but were in position when the filling of the courtyard was made.

In the courtyard of the northern wing of Ahab's palace (S6), between the northern wall and the northern face of the palace proper, there was a large cemented pool or reservoir. (See Pl. 21 a, Figs. 40, 41, and Plan 5, FG 5.) Its structural connections were destroyed, but the bottom showed at least two layers of cement harder than the underlying rock, and one reconstruction on a smaller scale.

The third period of the palace was represented by a structure added to the western face of Ahab's courtyard. The masonry was even better than that of the palace of Ahab. The most characteristic feature was the large round tower at the SW corner. (See Plan 5, AB 14-15.)

The picture of the Israelite city is completed, so far as the present excavations go, by the fortifications, a strong wall along the edge of the cliff in L. T. 1, and the walls at the Gateway. All these show the same massive construction, the foundations being laid in a trench sunk from 20 to 100 cm. in the solid rock. Inside the gate a wall, apparently of Israelite construction, led off to the northwest, and seemed to mark a street leading up the hill. The cliff wall at the summit (L. T. 1) seemed, so far as one could judge by the present topography, to follow the descending edge



15. Plan of Ostraca and Osorkon Houses.

of the cliff down to the south of this street. But the excavations could not be carried far enough to settle either of these points. Under the Basilica a rock-cut face and a wall were found which seemed to be Israelite; but here again the area excavated was insufficient to give assurance. It seems certain, however, that

the gateway, as in all periods, was the western entrance to the city, and that the Israelite city was much narrower from north to south than the Greek and Herodian cities.

#### THE ROCK SKELETON

The hills around Samaria have nearly bare summits. The undisturbed earth, where it exists, is a reddish-brown, gravelly soil. The same earth was found in the crevices of the hill of Samaria, and it is probable that in the days before Omri the hill had much the same appearance as that of the surrounding hills to-day. On the surface of the artificially faced pinnacle described below (i.e., inside the area marked by the Omri scarp), where alone the ancient rock surface is preserved, there are cups, hollows, and small trenches, such as are found all over Palestine. (See Pls. 18 a; 4 b.) These are covered or cut by the Israelite walls (see Pl. 4 d), and certainly belong to the period before Omri, when the rock summit must have been exposed, as the summits of the surrounding hills now are.

The ancient rock hill was considerably modified during the construction of the earliest buildings on the site. The rock is a soft, yellow limestone—so soft that in S7 we were able in three days to cut a hole in it with picks to a depth of three metres. The blocks of stone used in the earliest building are of the same material, and were certainly cut on the spot. The outline of the earliest building was marked by a perpendicular, artificially cut rock-face (see Plan 5). Outside this rock-face, or scarp, on all sides, the surface of the rock was scarred with quarry-marks, and a number of blocks of stone were still in place, cut free around the sides, but undetached on the bottom. (See Pl. 15 b, c, and Fig. 1, p. 37.)

This artificially dressed summit was the ancient rock summit, and lies just east of the apparent modern summit. The continuation towards the east was not excavated, owing to lack of time. The rock to the west, south, and northwest of the summit, occupied by Omri's palace, was not dressed, except for the construction lines of the later additions to the palace. But on the north, from a point four metres north of the Herodian altar, a broad space had been leveled 32 metres wide and 30 metres long, extending to the southern edge of the Israelite pool.

Besides these quarry and construction marks, the body of the hill was penetrated by a number of caves. The caves in L. T. gave abundant evidence of occupation in the Second Century B.C., but they were apparently natural caves, whose entrances had been covered in Israelite times by the city wall. The cave in L. T. 5 was likewise a natural hole, which had been covered up during all periods. The cave in L. T. E.<sup>1</sup> may also have been natural, but was occupied in Roman times. The caves in S4, S5, S7, S8, and S11, also, were almost certainly natural caves more or less modified by the hand of man, but all the fragments of pottery and other objects found in them were Israelite.

Beneath the Greek Fort Wall the rock was lightly dressed in places to take the first course; but all other later walls were founded simply on the rock surface (Post-Israelite, Herodian) or in the debris (Greek, Preherodian, Severan). On the

<sup>1</sup>There is another cave, unexcavated, about 30 metres east of the cave in L. T. E.

other hand, during the Greek and Roman period the rock was honeycombed with cisterns and vats.

Thus the main modifications of the rock surface were the work of the Israelites. But the rock itself was penetrated everywhere by cisterns of the later periods; and some of the old natural caves had been occupied even as late as Roman times. As each of the cisterns had a construction pit reaching to rock, cutting through all older debris, it is clear that in dating the older debris the greatest care had to be taken to secure unbroken blocks of debris, and that mere proximity to the rock surface was no proof of early date.

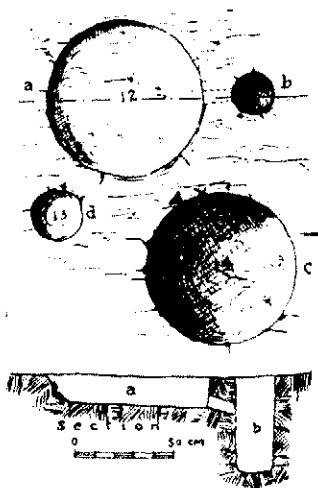
#### ROCK CUTTINGS AND CAVES

Various types of rock cuttings<sup>1</sup> were noted and measured by Mr. Fisher as follows:

1. Small single sockets for holding the pointed oil and wine jars characteristic of the period. These cups are seldom found isolated, but in connection with the presses. No. 5, in a small depression, 24 cm. wide and 15 cm. deep, although apparently isolated, may have belonged to a group of Type 3, destroyed by the Israelite foundation trench. No. 9, in K 10, was 33 cm. wide and 12 cm. deep.

2. Bowl-shaped hollows of larger diameter and deeper than those of Type 1. No. 10, in K 10, was 28 cm. wide and 30 cm. deep. No. 11, in J 11, was 22 cm. wide and 27 cm. deep. No. 20, in H 19, was 50 cm. wide at its mouth, but widened out below to a spherical shape; it was 90 cm. deep. No. 21, in G 4, was 50 cm. in diameter and 45 cm. deep; it may have formed part of a group of Type 3 which had been destroyed by the trenches for the Israelite wall to the north of it.

3. The simple press, consisting of a shallow flat depression, with a channel leading from one side to a deep collecting bowl. Often there was a second, separate storage basin, and, around it, one or more small sockets to hold jars (Fig. 16). The best example of this type was the group of cuts numbered 12-14 in JK 12 (Pl. 3 b). The press, a, was 80 cm. in diameter and ca. 12 cm. deep. A small orifice pierced in the rock led the liquid to the collecting bowl, b, which was 20 cm. in diameter and 46 cm. deep. Near it was a storage basin, c, ca. 77 cm. in diameter and 55 cm. deep. Into this the oil or wine was dipped from b. A jar socket, d, 25 cm. in diameter and 15 cm. deep, was near it. Another example included Nos. 1-4 in J 10. No. 4 was the press (much broken and worn away), connected by a surface (?) gutter<sup>2</sup> with its collecting bowl, 37 cm. in diameter and 22 cm. deep. To the north were three jar sockets, Nos. 1-3, each ca. 17 cm. in diameter and from



16. Rock cuts 12 to 14 in JK 12. Scale, 1:40.

<sup>1</sup>Both Sellin, *Tell Ta'anek*, pp. 34 and 36, with Figs. 31 and 33, and Schumacher, *Tell el-Mutesellim*, I, 154 ff., with Figs. 226 f. and Pl. 49, call such a rock cutting "Felsaltar." The latter gives an example (p. 164) of a square molded pedestal with similar cuttings on its top. It is evident, how-

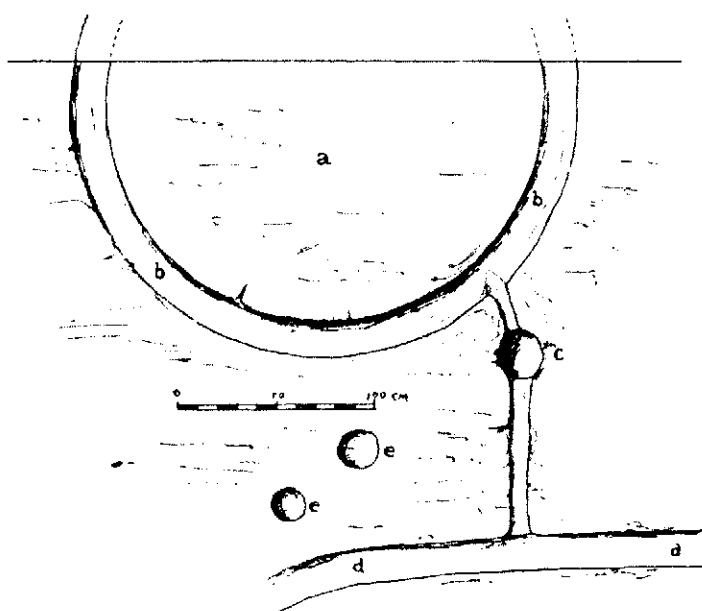
ever, that the block for this pedestal was taken from a portion of rock which already had on its surface these cuttings, and they had no other significance in connection with the pedestal as such.

<sup>2</sup>The connecting gutters in group 1-4 and in group 6-7 may have



10 to 12 cm. deep. Nos. 6-7 (Pl. 4 d) in J 10 were parts of a similar group. The press was originally ca. 70 cm. wide and 14 cm. deep, but was partly worn away. Its connecting bowl, 42 cm. wide and 55 cm. deep, was intact, with its connecting surface (?) gutter; but the storage basin had been pierced by the rock trench cut for the foundations of the north wall of court 7 of the palace of Omri.

4. Circular trough presses, consisting of broad circular beds of rock surrounded by deep narrow channels which collected the liquid, and led it thence, through one or more channels, to the collecting bowls. From their larger size and their peculiar arrangement, it would seem that these presses were for olives rather than for grapes, although the distinction is not certain. Of these there were two. No. 17, in J 8, was partly concealed by the eastern wall of the later temple staircase, but was otherwise well preserved. The central press, a, was ca. 2.10 m. across, and the channel, b b, surrounding it was 20 cm. wide and 12 cm. deep. From the northeast side started a narrow gutter, which at a distance of 20 cm. widened and deepened into a bowl, c,



17. Rock-cut press, No. 17 in J 8. Scale, 1:40.  
(Excavated in 1908.)

and then continued towards the east for 80 cm. more, opening into a second channel, d d, at right angles to it. One end of the latter curved towards the east and was lost under the side of the excavations, and the other end extended 2.20 m. towards the north and disappeared under a heavy wall running east from the foot of the Roman staircase. Between the central press, a, and the south channel, d, were two jar sockets, e e. The second example was No. 15, in J 11. Here again the complete ring could not be traced, owing to the presence of later walls above it. Judging from the exposed portion, the diameter of the ring was ca. 2.20 m., and the gutter was 10 to 12 cm. wide.

5. Unique types. Just south of No. 17 was No. 18, in J 8-9. It consisted of three small bowls connected in series by a curving gutter which emptied into a large shallow basin. Still further south was No. 19, which resembled Type 3, but had the gutter continuing beyond the collecting bowl towards the east, disappearing under the edge of the excavations.

There were doubtless many more presses of all these types scattered over the surface of the hill.<sup>1</sup> Those which are preserved are mainly within the limits of Omri's building, where the only alterations in the surface made by the builders were

been orifices cut through the rock as in group 12-14, but the wearing away of the upper part makes them appear as open gutters.

<sup>1</sup>For the method of using these presses and a full exposition of the subject, see R. A. Stewart Macalister, *Excavation of Gezer*, II, 48 ff.



the rock channels for their walls. Outside the palace limits the entire surface was cut away over a considerable area, thus destroying all traces of previous work. During the season of 1908 a number of small cuttings were found on the rock surface just outside the line of the Greek Fort Wall in the east end of the Trench E. All these were, however, very irregular in shape, and bore no resemblance to those just described.

The measurements of the two caves in S7, taken by Mr. Fisher, are as follows:

Cave 1 (see Plan 2, C 11) had an irregular entrance, 1.87 m. high, 1.09 m. wide at the bottom, and narrower at the top, which was 1.9 m. below the edge of the scarp (Pl. 30 b). The bottom of the door was somewhat below the level of the surface of the rock outside the cave, and several rude steps were cut down to it. The right side of the opening was roughly hewn in the form of a jamb, 1.84 m. wide; but the left side extended obliquely from the outer face of the rock, the axis of the cavern being  $3^{\circ} 45'$  N. of E. The roof followed the stratification of the rock and was practically level. The bottom, however, sloped down at an angle of  $37^{\circ} 30'$  for a distance of 21 m., and then continued level for 4 m. farther. Just inside the entrance, owing to the offset, the cave widened to 1.57 m., and from this point gradually widened to 3.5 m. at the bottom. The rock slope was cut out into thirty-five irregular steps, much worn by use. The rock here was of soft, splintery, yellow limestone, and a great many pieces had flaked off from roof and sides, covering the steps and bottom of the cave.

The second cave was only 5.5 m. to the north of the large one. Its opening was 1.57 m. wide and ca. 1.8 m. high. It started in the same direction as the other, but at a distance of 4 m. from the entrance turned sharply to the north and widened into a bell-shaped cavern 4 to 4.5 m. wide. This had later been turned into a cistern, and the passage had been blocked up with flat, squared stones. Outside of this was another wall of small rubble, 50 cm. thick.

## CHAPTER IV

### DESCRIPTION OF THE DEPOSITS OF DEBRIS IN THE VARIOUS WORKING SECTIONS AT THE SUMMIT

Summit strips 1-11 — Lower terrace — Subterranean corridor — Summary

In order to give an insight into the character of the different deposits of debris at the summit and to make clear the sources of the accumulations, each working section is here taken up in order, and its deposits are described in detail. The order followed is the simple numerical order (S1-S11), with the Lower Terrace (L. T.) and the Subterranean Corridor (S. C.) at the end.

#### 1. SUMMIT STRIP 1 (S1)

S1 was entirely within the area of the Omri palace, on the highest rock platform. The surface of the rock in HJK 12 was nearly the same as the level of the Atrium House in S7, while the mosaic pavement in S1 and the rooms therewith connected had a floor-level of 438.61 m. (about 2.20 m. above the Atrium floor). This mosaic was 3.15 m. below the temple floor, and the well-dressed superstructure of the restored east wall of the temple began about 20 cm. below this level. Cistern 9, which was covered by the cemented basin of the Mosaic House, contained a coin of Herod Archelaus (Reg. No. 1499, Coin List V 12 a). This house may therefore be taken as fixing the level of the Severan period on this side of the temple (i.e., 438.61 m.). Thus with the rock at 436.30, we have only 230 cm. of debris representing the accumulation from the Omri period to that of the Severan colony. Just inside the eastern wall of the temple in S2 the same period was represented by 600 cm.; and west of the Omri scarp by 915 cm. This is an excellent example of the futility of expecting regular horizontal strata in this site, and may serve as a warning for excavators at other sites.

When the Omri palace stood intact the floor must have been above the highest undressed foundation wall. On the scarp in GH 12 the outer wall, dressed outside and undressed inside, rises to 437.27 m. All the walls inside are undressed foundation walls, in other words, the retaining walls of filled foundation compartments. The foundation walls bore the walls of the superstructure, and the filling bore the floors of the rooms of the superstructure. These floors were then above the highest remaining wall, that is, above 437.27 m. Now the room 11 in the Ahab palace, which is built against the Omri palace, is preserved to a height of 150 cm. above the floor, but the original height must have been nearer

300 cm., considering the general character of the building. It was possibly even higher, but can hardly have been less. In all probability the floor of the next story above room 11 in the Ahab palace was about on a level with the ground floor of the Omri palace or even a little lower. Thus we arrive at a level of 438.77 m. as a probable minimum level of the floor of the Omri palace, or over 300 cm. above the rock. The filling of the walls as far as uncovered would have required about 5500 cubic metres of debris to reach this level. It is thus clear that the deposits in S1 have at some time been considerably cut down.

Leaving aside the southwestern quarter of S1, where there was a great filled hole caused by the removal of stone, the debris under the basin and the mosaic floor, and the same levels to the north, was black earth containing Rhodian jar handles, Megarian potsherds, and other objects dating from the Fourth to the First Century B.C. This debris descended to the packed yellow layer 50-80 cm. above the rock, but had been so disturbed by successive foundation trenches that the manner of its deposition could not be discovered. However, the Israelite wall in J 11 rose to 436.34 m., and it is improbable that any of the floors subsequent to the Israelite fell below this level. In fact, the only traces of floors found were above this. In S1 III 29 (Plan 6 J 12) a trodden floor was uncovered at 436.79 m., but this was a construction floor, not a living floor. The adjacent wall on the east had the floor-level marked on it at about 437 m. In S1 III 25 there was a *tannûr* with its bottom at 436.53 m. and in S1 III 24 two others with their bottoms at 437.11 m. All the floors thus indicated were in any case above the top of the Israelite wall (436.34 m.), but it is probable that only two floors are to be inferred, one at about 437 m. and the other at about 437.60 m. The *tannûrs* were originally 30-50 cm. high and seem to have been sunk in the floors to which they belong. Of course it is always possible, as these evidences were found in different rooms, that the two floors thus inferred belong to the same period.

It is clear that at some time after S2 was filled in to 437.27 m., a floor was made in S1, which was somewhat lower. But as the terrain in S2 rose in the Hellenistic period upwards to the floor of the last Preherodian house in Insula IV the floor-level in S1 must have approximately kept pace with it. Thus the floor-level of the last Preherodian period in S1 may be estimated at about 438.60 m. Now the mosaic floor had a level of 438.61 m., but for the reasons already given this pavement with the accompanying walls is assigned to the Severan period. The big double basin west of the pavement descended to 437.61, or practically to the upper of the two floors inferred above. The cemented basin with steps went down to rock, but showed reconstructions and four layers of cement. It may have been in use in an earlier period, but as found it was connected with the house of the mosaic floor. The level of the stone pavement north of the step basin near cistern 4 was 438.24 m. This also seemed to be part of the same house, but the earth was badly cut up and the connection was not clear.

Above this level of the mosaic floor the debris was disturbed black earth containing Roman lamps, blown glass, and other objects of late date. Above, this

stratum merged into the agricultural debris. The walls had undoubtedly been removed for building-stone.

## 2. SUMMIT STRIP 2 (S2)

The rock under S2 was divided in the middle by the Omri scarp, which ran north and south through the greater part of the area. The eastern half formed part of the high rock platform on which the Omri palace was built, while the western half included the larger part of the lower platform of the main Ahab palace. The highest point on the Omri walls was just east of room S2 IV 13, where an outer wall rose to 150 cm. above the rock. The outside of this wall was dressed (i.e., exposed to view), but the inside was left rough (i.e., not exposed to view). The other Omri walls were seldom more than one course high and were all rough foundation walls. The room spaces shown on Plan 5 were therefore only foundation compartments originally filled with debris up to the floor-level of the palace. Unfortunately the level of this floor was not determinable, but the height of the wall on the edge of the scarp, mentioned above, shows that the floor was more than 150 cm. above the rock. Only the lowest stratum of the filling was found, a layer of packed yellow mason's debris like the lowest stratum in the Ostraca House. The rest of the mass of earth required to fill the Omri compartments had been disturbed partly by weathering but mostly by later building operations. It was clear however that the basis of the accumulation of debris in S1 and S2 was formed by the filling of the Omri palace.

It is uncertain whether the lower platform was left clear during the Omri period or occupied by minor buildings. In S7 there were some fragments of wide walls which appeared to belong to the earlier period, but these could not be traced eastward beyond the Preherodian street. In any case the lower platform in S2 was cleared previous to the construction of the Ahab palace. The most notable feature of this area for the question of the accumulation of debris was the relation of the floors of the subterranean room (13) and of rooms 11 and 12 to the rock. There was a difference of three metres in level between the two floors, but the greater part of this difference was caused by the difference in the rock levels below the rooms, which amounted to 208 cm. The floor of room 11 was 90 cm. above rock, while that of 13 was sunk in the rock. A fragment of the floor of the room next south of 13 was still in place on the rock and showed that the floor was 81 cm. above that of 13. The point is that the floors of all the rooms of the Ahab palace followed the surface of the rock and were close to it. Southwards in EFG 13 (south) and 14 (north), the rock sloped gently down towards the double wall which enclosed the Ahab court and palace. The hollow thus formed must have been filled with yellow debris at least as high as the floor-level south of 13 (433.42 m.). The double enclosing wall must however have been filled to at least the same level as west of the courtyard (434+ m.), and probably to the level of the floor of room 11 (i.e., 435.80 m.). The structures which stood between 13 and the double wall have been destroyed by the later walls. Possibly the walls of rooms 81-83 are in part built on Ahab walls which formed the transition from one level to the other. Except for

the double wall itself and the assumed intermediate structure, which formed only a small part of the whole, the Ahab palace in S2 did not have filled foundation compartments, and yielded only debris of decay to add to the general accumulation. The disturbed yellow debris found above the rock must have come therefore from the Omri compartments on the east. The deposit of debris of decay between the destruction of the palace and the beginning of the early Post-Israelite period could not have been great, but these lower rooms would certainly have been littered with stones from the walls. Thus it comes that the early Post-Israelite buildings in this area stood practically on the old floors with a low-lying room (or rooms) in 13 and southwards and high-lying rooms to the north. The low-lying rooms were probably cellars. The floors of the upper rooms were partly preserved in room 14 and westwards at about the same level as that of the Ahab rooms 11 and 12. Room 11 was manifestly used in the early Post-Israelite occupation in connection with room 14. But the walls of 14 were of a masonry entirely different from the Ahab work and were built against the Ahab wall in 11. Moreover in 13, where the stone pavement of the older room was preserved and still marked with the lines of the Ahab walls, the Post-Israelite walls showed a different ground plan. These walls were manifestly built after the destruction of the palace, in a far inferior style. Yet it must be remembered that the Post-Israelite walls, owing no doubt to the abundance of dressed stones in the ruins of the Israelite palace, were in general well built, and appear bad only in comparison with the older walls.

The floor-level of the higher Post-Israelite rooms (14) was 435.80 m., or nearly a metre above the floor of the probably contemporaneous Osorkon House. But this difference in level is easily explained by the fall of the rock and of the Israelite ruins in this direction, for it is somewhat less (ca. 60 cm.) than the difference between the level of the Ahab palace and that of the Ahab courtyard.

The early Post-Israelite buildings seem to have suffered destruction similar to the older buildings but not so complete as the later ones. Up to this time the Ahab floor-levels had been maintained but now the lower rooms (13, etc.) were filled in to the level of 14 and apparently the old Post-Israelite ground plan re-used. The doorway of the room above 13 was about 10 cm. further west, but the new masonry of the side walls stood on the old masonry. Probably rooms 11 and 14 were still part of this later house. The earth used for filling was disturbed yellow debris and came, I think, from the filling of the Omri compartments on the east. But over this, below the succeeding walls, was a layer of coals and ashes.

The succeeding building operations down to the last Preherodian period were lost beyond recovery, but at some time in this interval the area of S1 and S2 was leveled off by cutting down the filling debris and other accumulations which lay over the area of the Omri palace and dumping them into the lower area of the Ahab palace. This operation brought the level of the floor of the terrace thus created above the tops of the highest Omri wall and of the still well-preserved walls of 11, 12, 13, and 14. The date of this leveling was previous to the Hellenistic period, for the objects of that period were wanting in the debris below the top of the wall in room 11, while the debris itself was dirty yellow, like the lower debris.

The depth of the layer of debris between the top of the Ahab walls and the floor of the Preherodian house above was about 150 cm. This debris, black and containing Hellenistic objects, represents the indeterminable period between the leveling operation and the construction of the Preherodian houses. A few scraps of walls were found, for the most part directly under the Preherodian walls. Probably the debris was still higher and was cut down by the Preherodian terracing operations. The fact that the rooms to the west and north are lower, points, I think, to leveling. In any case, in view of the destruction and construction of successive towns in this period, an accumulation of 150 cm. or more of debris is not an unreasonable supposition.

Above the floors of the highest Preherodian house (house A in Insula IV), the area was filled in to a depth of 2.75 m. to form the floor of the Herodian temple. This was perfectly clear. The foundation trenches of the Herodian walls cut through the floors of the last Preherodian houses and through all underlying deposits to rock or to massive Israelite walls. These trenches did not cut the filling above the Preherodian floors. The filling was packed against the Herodian walls and had been put in place after these walls were finished at least as high as the temple floor.

At the restoration of the temple in the period of Severus the only walls which caused any serious disturbance of the underlying deposits were the two great pilasters in the vestibule and the wall between the vestibule and the cella. These went down to the hard Israelite layers. The only floor of either the Herodian or the restored temple which was preserved was the stone pavement of the portico. The modern surface was about 105 cm. above the northern edge of the pavement and sloped down to about 50 cm. above the southern edge. It continued falling towards the south until it passed below the temple floor-level just above the north wall of the restored cella. Above the south wall of the cella, the modern surface was about 50 cm. below the level of the temple floor. The upper 50 cm. of the surface debris was manifestly agricultural earth. At no very distant date, the stones had been removed and a certain amount of earth spread over the area. On account of its height the earth here did not retain moisture sufficiently to make it suitable either for sowing grain or planting olive-trees. There were only two olive-trees on the place when we began work. It is probable for this reason that the summit was one of the last areas in Sebaste to be put under cultivation.

### 3. SUMMIT STRIP 3 (S3)

In S3 the outside face of the Ahab wall was exposed in its day to within 30 cm. of the rock (see Fig. 25). The wall would have reached the floor-level of the courtyard about seven metres above the rock and probably rose several metres above the courtyard floor. The foundation compartments of this outer double wall were filled with yellow debris up to the floor, but the filling differed from that of the courtyard in having been laid down apparently in several layers. Only the lowest of these was intact. This showed a trodden surface at about 430.87 m. and had been deposited probably for the convenience of the masons when the compart-

ment walls had reached this height. I judge that above this there were two more such layers each of about 150 cm. thickness.

The ground to the west in S5 was occupied by part of the Third Palace (Jero-boam II), but it may be doubted, owing to the absence of foundation trenches in the rock, whether the ground to the south was also occupied by a later Israelite building.

When the palace was destroyed, the outer Ahab wall, exposed to view, probably suffered more than the compartment walls. In the earliest Post-Israelite period it must have suffered still more from the removal of stone owing to its exposed position and to the excellent dressing of its stones. On top of the fourth course we found a line of roughly laid Israelite stones forming a fragment of a wall which a comparison with other walls shows could not have been later than the early Post-Israelite period. Thus in the Post-Israelite period the edge of the Ahab filling held up by the interior compartment walls formed a sharp declivity. This conclusion is fully borne out by the position of the Greek Fort Wall, which, undoubtedly following the contour of the summit of its time, passes just inside this assumed declivity and turns out to the south only when it reaches the southern wing of the Ahab palace in S2. The mass of disturbed yellow debris which we found over the outside Ahab wall and in S3-306 and 315 came no doubt partly from the earth taken from the foundation trench of the Greek Fort Wall.

In the Hellenistic period, the area of S3 a-c, protected by the Greek Fort Wall above, was still only lightly covered with debris. The northern wall of room 314, part of a house of that period, rested on the outer wall of the Ahab courtyard. To the south, rooms 317 and 318 belonging to this same house extended under the Preherodian street (Lambda). The cistern under the street probably served the same house. The contents of the cistern included a number of coins and a great mass of potsherds, but nothing which could be dated with certainty later than 150 B.C.

The floor of the Preherodian street Lambda was about 325 cm. above the rock and about 150 cm. above the floor of the Hellenistic house. Thus S3 a-c south of the filling of the Ahab palace was still comparatively free of debris at the time when the Preherodian town was built. At that time a retaining wall was built along the northern side of the street and a much heavier one along the southern side. This shows clearly that the southern wall was expected to bear the heavier weight. On the south the Preherodian rooms (319-324) were on the same level as those in L. T., about three metres below the street. On the north the ground was probably filled in to form a terrace for houses, somewhat lower than Insula VI.

The western face of the apsidal structure shows by its dressing that in the Roman period the Preherodian terrace had broken down and the filling had spread to form a steep slope just north of the line of the Preherodian street. The rest of the considerable deposit of earth which we found covering even the apsidal building and lying four metres deep over the Preherodian houses south of the street (see Plan 4, section C-D), was entirely due to agricultural terracing.

## 4. SUMMIT STRIP 4 (S4)

The chief features of S4 were the floor of the Ahab courtyard, several layers of Hellenistic debris, the floor of the Herodian house, and the remains of the Severan period. This unusual preservation of material was due to the protection afforded by the debris held up by the Greek Fort Wall on the west and to the absence of large buildings during all the Greek and Hellenistic periods. The floors of the building terraces, made during these periods, never fell below the top of the foundations of the Greek Fort Wall (ca. 434 metres above sea-level). The floor of the Ahab courtyard was about 434 m. above sea-level, while the floor of the earliest Hellenistic building was at or above 435 m. The lower layer of the debris between was disturbed yellow debris containing a great abundance of Israelite potsherds (none of them inscribed). The earliest Hellenistic walls were in a fragmentary condition, but the few blocks of masonry preserved rested on the disturbed yellow debris. The debris in which these blocks of masonry stood was black, and contained Hellenistic objects. It showed two floors, one being two or three centimetres under the Herodian floor and the other about twenty centimetres lower down. The blocks of masonry west of the Herodian street were apparently connected with the lower floor, but east of the street there were some walls manifestly belonging to the upper floor. The Preherodian walls had been cut away down to the floor by the Herodian terracing; and the Herodian walls were built either on the earlier walls or in very shallow foundation trenches. This Herodian house was part of the Atrium House in S7 with which it was connected by doorways. The house is dated by the objects found in the Preherodian cistern S7 No. 1, the mouth of which was covered by the floor of the house and by cistern S7 No. 2, which was in use during the occupation of the house. The cistern S4 No. 1 contained a coin of Herod I (Reg. No. 3731). The debris above the Herodian floor was a continuation of the upper layer in S7 and is explained in the discussion of S7. The coins found in the upper debris included one of Ptolemy II (Reg. No. 2709) in room 341, one of Ptolemy II (Reg. No. 2707) in room 342, one of Dora (Reg. No. 3297) in room 351, and five illegible coins. In the upper debris of S4 f-g, there was one doubtful Ptolemaic coin (Reg. No. 2691), one of Antiochus IV (Reg. No. 2693), and one of Antiochus IX (Reg. No. 2695). In a hole in the floor of room 201 north of the bath a hoard of 22 coins was found, one of Antiochus VII and twenty-one of Tyre (see Coin List IV 10). Under the floor of the southern room of the same house was found a coin of Demetrius II (Reg. No. 3675), dated 144-143 B.C. Under the street floor, S4-357 sub, in the first 30 cm. of debris, the coins found were of Ptolemy I (Reg. No. 3701), Ptolemy III (Reg. No. 3708), Antiochus IV (Reg. No. 3830), Antiochia ad Orontem (Reg. No. 3828, 1st Cent. B.C.), and one illegible coin.

The western part of S4 was occupied by a great trench of disturbed debris descending beside a bank of yellow Israelite debris to the rock. This trench had contained the eastern wall of the Herodian SW tower, but the stones had been taken out for building purposes and the trench refilled with earth. During this process the black and yellow deposits had become mixed so that many Israelite



fragments were found along with the usual Hellenistic objects. The coins were one of Ptolemy I (Reg. No. 2694), one of Ptolemais-Ake (Reg. No. 2710, 2d cent. B.C.), one apparently of Roman date, and one illegible coin.

#### 5. SUMMIT STRIP 5 (S5)

The two parts of S5, the southern (a-d) and the northern (e-h), presented very different conditions. The deposits in a-d were a continuation of those in S3 a-d, while those in e-h were related to the deposits in the western part of S7 and S8.

In S5 a-d, the rock showed the construction lines of the Third Palace (Jeroboam II) and a few Israelite stones still in place (see Plan 5 AC 14-15 and Pl. 26 c). Over this, except over the walls, there was a thin layer of packed yellow debris. Then came a bank of mixed black and yellow debris which originally extended in a slope from the Greek Fort Wall southwards passing under the street floor at a depth of about 80 cm. This bank was cut by the boundary walls of the street, and again about half way between the street and the Greek Fort Wall by a depression, which had been produced by the removal of building stone. This depression, or rather trench, was filled with coarse debris from the earth dumped on the site to form the last Preherodian terrace. The terrace itself had broken down and spread over the street to a depth of about a metre. The debris of decay thus formed was marked above by a weather-beaten surface. Over this lay the earth of the modern agricultural terrace.

The yellow debris contained only a few small Israelite potsherds and one iron arrow-head found on the stones of the Israelite round tower. In the bank of mixed debris were found Rhodian jar-handles, Megarian potsherds, a fragment of a Greek figurine (Reg. No. 3333), a dressed bone like those in S1 cist. 7 (Reg. No. 3332), a fragment of an Israelite figurine (Reg. No. 3318), and two iron arrow-heads (Reg. Nos. 3228 and 3289). In the Preherodian terrace earth a large number of Hellenistic and Greek potsherds and other objects were found, including coins of Ptolemy II (Reg. No. 3178), Antiochus IV (Reg. Nos. 3145, 3191, 3248), Antiochus VII (Reg. No. 3194), Alexander II Zebina (Reg. No. 3360), Cleopatra and Antiochus VIII (Reg. No. 3645), Antiochus VIII (Reg. No. 3144), and Ptolemais-Ake (Reg. Nos. 3152, 3193, 3247). The agricultural debris contained the usual mixture of objects of all periods.

The northern part of S5 (e-h) had been greatly disturbed by the building of the Roman walls as well as by earlier operations. The inner SW angle of the Greek Fort Wall had been cleared to rock as far as the northern side of the SW Roman tower when that tower was built; and the Roman tower had itself been well-nigh destroyed by the removal of building stone in modern times. It was nevertheless clear that the foundation of the accumulated debris was due to the filling of the Ahab courtyard and that of the compartments of the Third Palace (Jeroboam II). The Greek Fort Wall rested on the remains of the walls of the Third Palace, and its lower courses were largely built of stones taken from the adjacent Israelite walls. The height of the remains of the Israelite walls under the

Greek Fort Wall showed that the Israelite walls in this region of the hill were only about a metre high at the time of the building of the Greek Fort Wall. The yellow debris may have been somewhat higher than the remains of the early walls but, allowing for weathering, lower than the Israelite floor. The construction trench of the Greek Fort Wall was dug wide, to give access to the adjacent Israelite stones. When the wall was finished, the trench together with the area inside the wall was filled in, to form a floor about four metres above the rock next to the wall, on a level with the floor indicated in other parts of the wall. As thereafter the Greek Fort Wall was maintained, the debris was held up to this level. The superstructure of the Greek Fort Wall was however no longer standing when the last Preherodian town was built, for house walls of this town were found built over the wall (see Plan 4, section G-H). The complex to which these walls belonged stood on a terrace which had been built out westwards beyond the Greek Fort Wall, perhaps even beyond the present-day slope marking the edge of the summit.<sup>1</sup> During the Herodian building operations, this part of the summit was also confiscated and the Preherodian houses destroyed to make room for the great SW tower and the Fort Wall. The deep foundation excavations of the structures caused the disturbance of the older deposits, as mentioned above. The Herodian floor inside the tower and wall was on the level of the floor of the Atrium House (see Pl. 53 e). This configuration was preserved during the Severan and later periods, but at a higher level.

In the upper layer, two coins of Constans were found, one in S5 h (Reg. No. 3290, July 2, 1910), and the other in S5 e (Reg. No. 3300, July 4, 1910). For the rest, the debris contained Hellenistic objects down almost to the rock. Only in S5 h were earlier objects found, Greek and Israelite, lying in mixed yellow and black debris in and beside the construction trench of the Greek Fort Wall.

#### 6. SUMMIT STRIP 6 (S6)

The area designated S6, lying between the altar in front of the temple and the Greek Fort Wall on the north, was characterized by the complete destruction of all the last Preherodian walls. About five metres north of the altar, there was a vertical rock scarp about three metres high, a continuation of the rock scarp of the Omri palace. From here the rock surface sloped gently away to the Greek Fort Wall, falling one and a half metres in sixteen. In the middle of the space was the Israelite pool, or reservoir, and just north of it a series of Israelite compartment, or foundation, walls. The Greek Fort Wall itself occupied a dressed rock scarp of the Israelite period. Between the Fort Wall and the pool a massive wall, apparently of early Post-Israelite date, crossed the area diagonally from west to east. A lighter wall of a similar period crossed between the pool and the Omri scarp. Over the southern part the rock was covered to a depth of about 50 cm. with packed yellow debris. The surface of this debris extended northwards, covering the pool and the Israelite walls, and broken only by the Post-Israelite walls and by the entrances to the cisterns (Preherodian). The whole area, at any rate as far as the northern side of the pool, had been cleared

<sup>1</sup>The present-day slope has been formed by cutting away earth, to level out the fields on the west just below the summit.

to this level. The earth above was dumped debris up to the clearly marked floor on which the altar stood. The mouth and the shaft of cistern No. 1 had been cut away by this clearing operation. As the contents of this cistern, in spite of the absence of coins, presented the usual series of objects of the last Preherodian period, it is evident that the clearing must have been made at the time of the construction of the Herodian temple. This conclusion was confirmed by the objects found in the dumped debris with which the cleared space was filled. The object of this great clearing is not certain. The excavated earth was probably used to fill the spaces in the foundations of the temple. But the S6 excavation was re-filled. Possibly the temple was found to require more earth than anticipated; and so as a matter of temporary convenience the S6 excavation was continued below the desired floor-level, and then filled in later, perhaps with earth taken from the construction trench of the subterranean corridor. The S6 clearing is about the same width as the temple. Above the plastered floor, there was a light layer of debris of decay, dating probably from before the Severan period. Above this came another layer of debris of decay covered with agricultural earth to the modern surface (see Plan 3, section A-B).

#### 7. SUMMIT STRIP 7 (S7)

In S7 the configuration of the rock surface is similar to that of S4. The surface slopes from near the face of the Ahab palace to the outer face of the wall bounding the Ahab courtyard. From here it descends by terraces, dressed to receive walls of the Third Palace, to a dressed surface west of the Greek Fort Wall and over two metres below the foot of the western wall of the Ahab courtyard. The rock under the area of the courtyard floor was apparently unaltered from the Omri period. The remains of thick walls under the Osorkon House were embedded in the lowest yellow stratum of the courtyard filling, and belong probably therefore to the Omri period.

As in S4, S5, and S8, the lowest debris above the rock was due to the foundation fillings of the Israelite buildings. It was not possible to determine whether the Ostraca House extended northwards into S7. The plan of the part preserved seems to require such an extension; but no trace was found of the foundations nor even of the foundation trenches. I am personally of the opinion that the Ostraca House did not extend into S7. The filling strata of the courtyard were found over the Osorkon House area, more or less broken by the walls of that house (see lowest yellow stratum in Pl. 37 b). Beyond the Osorkon House northwards to Trench F, the debris had been disturbed almost to the rock by the removal of building-stones, but it is very probable that the floor of the courtyard extended over this whole area at about the same level as in the Ostraca House.

The floor of the Third Palace (Jeroboam II) may have been lower than that of the Ahab courtyard, but it was higher than the tops of any of the walls preserved outside the courtyard. With the exception of the northern face of the southern wall of S7-322 (Plan 5 BC 11), all these walls were roughly laid

compartment walls like those in the interior southwestern angle of the Ahab courtyard, and formed the walls of filled foundation compartments. The facing on the wall in 322 was a later reconstruction. The western entrance to the palace may have been north of this wall, or there may have been a room or passage here which gave access to the great cave.

It is clear that when the palace walls were pulled down the debris left on the site must have been beaten by the weather into a slope which crossed the line of the Greek Fort Wall at a level not far from 434 m. above sea-level (the level of the Ahab courtyard). To this level, or slightly higher, the Greek Fort Wall was built with a floor about 80 cm. above the Israelite floor (see the floor-level of the Osorkon House doorway = 434.88 m.). At this time, or soon after, several stout walls were built, some of them against the Greek Fort Wall (see Plan 6 BCDE 10-11). Except the northern wall of the Osorkon House all these walls were shown by their masonry to be foundation walls. With the exception mentioned, the highest wall was the N-S wall above the Ahab rock-scarp. This wall rose to 434.64 m., about 55 cm. above the courtyard floor and about 24 cm. below the Osorkon House floor. Up to this level there was no trace of an early Post-Israelite floor on the west of S7. The Osorkon House (Plan 6 DE 11) appeared to belong to this period. Separated from the long chambers on the west by a passage three metres wide, it adjoined the Ostraca House on the north, but was not structurally connected with the older building. The southern wall of the Osorkon House must have been built over the northern wall of the Ostraca House, as preserved. In the northern wall of the Osorkon House, a doorway gave the level of the floor as about 434.88 m. above sea-level or about 77 cm. above the courtyard floor. As the rock is higher here than under the Ostraca House, it is possible that the courtyard floor rose slightly in this direction. The Osorkon vase and the ivory uræus were under the floor of the Osorkon House and were either in place when the Osorkon House was built or were in the earth used in leveling the floor of that house. The layer in which they were found contained only Israelite objects, mostly potsherds, and appeared to be the same layer of surface debris as that which contained the Israelite ostraca.

Above the floor of the Osorkon House at heights varying from 45 to 70 cm. were the floors of the last Preherodian rooms, 711, 712, and 713. These floors were certified by doorways. The debris under the floors contained a coin of Alexander II Zebina (Reg. No. 4109) and a few other Hellenistic objects. About 70 cm. of black debris separated these floors from the floor of the Atrium (S7-364), but the floors of the Preherodian rooms just west of the Atrium practically coincided with the floors of the Herodian rooms S7-365, 366, 367, and 368. Insula VI was therefore terraced in the middle similarly to Insula IV. The western part was lower and furnished a transition level to that of Insula III.

The nearly complete plan of the buildings of the Herodian period is given on Plan 8. The walls of the Atrium House were largely founded on the earlier walls. Elsewhere the foundations were shallow, and caused little disturbance to the underlying debris. On the west, however, along the Greek Fort Wall, the

heavy Roman Fort Wall required deeper foundations, which descended below the 434 m. level but not to the lowest deposits. The removal of this wall in comparatively modern times increased the disturbance caused by its construction.

The Atrium House was clearly a co-ordinated part of the Herodian buildings at the summit. Its Herodian date was confirmed by the contents of two cisterns. The mouth of cistern No. 1, covered by a limestone slab, was just under the floor of room 365. The cistern contained the usual pottery of the last Preherodian deposits but no coins. Cistern No. 2 was structurally connected with the Atrium House and had manifestly been used by its inhabitants. The cistern had not been filled up and had been partially protected by its form from accidental filling. In the lowest layers of silt were found unmistakable Roman objects, including blown glass and a coin of Antiochia ad Orontem (Reg. No. 4648, 40-30 B.C.).

Above the floor of the Atrium House there was a heavy deposit of earth, the upper layer of which was due to agricultural terracing. Just under the agricultural layer, there were walls of the later Roman period, but with two metres of debris between their floor and that of the Atrium House. It is extremely difficult to account for this deep deposit as debris of decay. There was nothing above the Atrium floor which would have yielded such a mass of dark earth. The decay of the walls would have left a white limestone deposit. We must look, I think, to the restoration of the temple in the Severan period for the explanation. It must be remembered that the Atrium House was bounded on the east by a street which ran between the house and the western portico of the Herodian temple. South of the portico the street was bounded on the east by a high wall. The space between the street wall and the temple was filled with earth, which may have formed the foundation of a slope or stair leading to the portico. Now, when the western wall of the temple was rebuilt in the Severan period it was not founded on the old Herodian foundation wall but on debris. This wall as we found it showed evidence of subsidence, and the rough rubble wall built along its western face had manifestly served to support the wall. The rubble supporting wall was sunk in the filling between the temple and the street wall. The excavation necessary to its construction must have yielded a certain amount of debris, which would naturally have been spread over the ruins of the Atrium House. The greatest excavation made during the restoration, however, was that for the construction of the great pilasters in the front portico of the temple. The earth from this excavation was no doubt thrown out in the most convenient place, which was the area of the Atrium House on the west. This earth was then leveled off to form the terrace on which was constructed the late Roman house (see Plan 9 E 10-12). The few rooms which we found of this house were filled with debris of decay, and covered with a light layer of agricultural earth.

The black debris above the Atrium floor showed the same general series of objects as the other black debris at the summit, but in addition Roman lamps and blown glass. The coins were: two of Ptolemy II (Reg. Nos. 3732, 3734),

one of Antiochus IV (Reg. No. 3745), one of Alexander II Zebina (Reg. No. 3712), one of Ptolemais-Ake (Reg. No. 4809), and, under the smaller vat of the Severan period, one of Herod I (Reg. No. 3822). The black debris under the Herodian floor showed the same general range of Hellenistic objects but without any Roman objects. This debris was found, however, only in rooms 715, 716, and 721 (see Plan 7 CD 10), and under the street (S7-357). Here there was a coin of Antiochus III (Reg. No. 4003), two of Antiochus IV (Reg. Nos. 4154, 3830), one of Tyre (Reg. No. 4002, 76 B.C.), one of Antiochia ad Orontem (Reg. No. 3828), and one of Herod I (Reg. No. 4155). Under the floor of the last Preherodian house only two coins were found, one of Alexander II Zebina (Reg. No. 4109) and one of Maccabæan star and anchor type (Reg. No. 4653), but with them were a number of the usual Hellenistic potsherds and other objects. On the top of one of the blocks of Israelite debris in room 712, the fragments of the alabaster jar with the Osorkon II inscription were found, together with an Egyptian amulet (Reg. No. 4107), an ivory handle (mirror-handle?) of Egyptian form, and a number of Israelite potsherds (not inscribed). In the area on the west of the western face of the Ahab Palace (rooms 772, 773, and 776), about half of the whole number of Israelite ostraca were found in the same floor debris as the others and as the Osorkon jar. The undisturbed yellow debris contained the usual Israelite potsherds, some fragments of bitumen (or "mummy," Reg. No. 4554a), an Egyptian amulet (a figure of Bes, Reg. No. 4632), and some fragments of bronze. The disturbed yellow debris in the northern part of S7, near cistern No. 5, contained a number of early objects, a scarab (Reg. No. 4594), an Israelite figurine (Reg. No. 4620), a fragment of an alabaster jar (Reg. No. 4621), a piece of blue coloring matter (Reg. No. 4622), and Israelite and Greek potsherds. In the disturbed black debris on the west, there was a mixture of objects of the Preherodian periods, including a coin of Ptolemy II (Reg. No. 4751), but the disturbed yellow debris beneath contained mostly Israelite pottery.

#### 8. SUMMIT STRIP 8 (S8)

The strip S8 presented only a small area undisturbed by later buildings. This was the area of the rooms 804-823. In the western part of S8 the reconstruction of the Greek Fort Wall had broken the deposits of debris down to rock. Later this reconstruction was broken away to within two metres of the base and the Roman west tower was built above it, but more to the east. Finally the Roman tower was well-nigh destroyed for its building stone, and thus the strata were thoroughly mixed. On the east of the strip, the excavation for the subterranean corridor and its subsidiary structures had cut out all deposits down to the Israelite or to rock. Only in the middle was the small group of rooms (804-823) mentioned above preserved, owing to the depth of their floors below the Herodian level and to the absence of Herodian buildings. The floor of these rooms, which were in the western part of Insula III, was 150 cm. below that of the western part of Insula VI and 220 cm. below that of the Atrium House.

The rock-face sloped gently downward, as in S7, from the western face of the

Ahab palace across the courtyard to a series of terraces dressed to take the walls of the Third Palace. Towards the north, the rock sloped still more gently from the highest point, north of the Osorkon House, to a line passing E-W through the southern face of the vault excavated in 1908. From this line northwards, it was broken by a great cleft, originally a cave in the rock, which had been exposed during the construction of the Israelite palace and filled with yellow mason's debris containing Israelite potsherds. On the rock was the usual light layer of packed yellow debris. The floor of the Ahab courtyard probably covered the whole area at a level approximately the same as that of the Ostraca House (i.e., 434+ m. above sea-level). The rock was, however, generally higher, so that the depth of the courtyard filling could not have been more than 80-100 cm. over the eastern part of the strip, increasing as the rock surface fell away westward and northward. The part of the Third Palace which occupied the ground west of the courtyard appears to have had the same filled compartments and the same floor-level as in S7 and S5.

After the destruction of the Israelite palace the surface of the debris sloped westwards, as in S7. Here again the Greek Fort Wall and the walls of a large Post-Israelite building had been sunk in this debris. The floor of this period was not recovered, but it was no doubt on the same level as in S7, and therefore nearly a metre above the floor of the Preherodian Insula III.

Even in the area of the Preherodian rooms 804-823 a clear view of the older deposits was denied us by the fact that the floor of the western part of Insula III was nearly half a metre lower than the Israelite floor. Thus the construction of Insula III had cut away all that part of the older deposits which contained important objects. No trace of any walls was found, a condition in agreement with the conclusion that this area was inside the courtyard. In rooms 815, 821, 822, and 823, the floors were about 50 cm. higher, showing that the Insula was terraced in the middle.

Low as the floors were, the debris beneath them was not undisturbed. Buildings of an earlier Hellenistic period had probably stood here. At any rate, the sub-floor debris of the Preherodian rooms was mixed black and yellow, and contained in the upper part many Hellenistic but no Roman objects. With these were Israelite and other early potsherds and one Ptolemaic coin (Reg. No. 4745).

The walls of the last Preherodian rooms were broken off just below the Herodian floor, about 150 cm. above their own floors. The rooms were filled with the usual dumped debris found in the last Preherodian houses at the summit, containing one coin each of Ptolemy II (Reg. No. 4053, in room 804), Antiochus III (Reg. No. 4880, in room 803), Alexander II Zebina (Reg. No. 4749, in room 861), and Antiochia ad Orontem (Reg. No. 4753, in room 814). In room 806 was the torso of a marble figure from a relief (Reg. No. 4001).

The Herodian floor was that of a broad street leading to a stairway built against the southern side of the vault (1908) and giving access to the temple level. Above this street floor there was only a light layer of agricultural earth. The most noteworthy object found in this layer was a coin of Constantius II (Reg. No. 3716).



## 9. SUMMIT STRIP 9 (S9)

The western part of S9 was occupied by the subterranean corridor, so that the well preserved eastern part lay between two large Herodian excavations, that of the corridor and that in S6. The rock surface rose from the western edge of S6 to a low N-S ridge cut by an Israelite drain. About two metres west of the drain and parallel to it ran a vertical rock scarp bearing the remains of a wall of the Ahab period. The eastern wall of the corridor covered this scarp and the Israelite wall. The drain, which was cut in the rock and roofed with limestone slabs, began in the highest part of the rock in S7 and had evidently served the Ahab courtyard. Over the rock was a thin layer of yellow debris, and the drain was filled with disturbed debris of the same sort.

East of the drain, where the rock descended gently to the level of S6, stood the lower walls of five rooms (see Plan 6 F 11). The orientation is the same as the Israelite, but in this quarter of the hill all walls have the same orientation. The spaces between the walls of these five rooms were filled with dirty yellow debris, in which occurred Israelite and Post-Israelite potsherds. No doorways were visible in the walls, and so the floor must have been above 435.40 m., the height of the walls. I am of the opinion that these walls are later than the Post-Israelite period, but they are certainly earlier than the last Preherodian houses above them.

Above these older walls stood the remains of the western rooms of Preherodian Insula II, the street Alpha, and the eastern rooms of Insula I (see Plan 7 EF 5-7) with the walls founded in part on the earlier walls (see especially the eastern wall of street Alpha). The ground had been leveled off in black debris and the floors were possibly even below the floors of the earlier rooms. The floors were 434.95 m. in Insula I, 435.50 m. in the street, and 435.64 m. in Insula II. In the first 50-80 cm. under these floors were found the usual series of Hellenistic objects, including five coins of Ptolemy II (Reg. Nos. 4636, 4637, 4643, 4644, 4650), one of Demetrius II (Reg. No. 4651), one of Antiochia ad Orontem (Reg. No. 4647), and one Maccabæan coin (Reg. No. 4654).

Next to the Greek Fort Wall there were two rooms with a floor about three metres lower than those of the rooms above. One of these had a square pillar as a roof support (S9-941). The floor was leveled in the hard Israelite debris, removing all except the bottom of the construction trench of the Greek Fort Wall. The rooms were filled with the usual Preherodian black debris containing among other objects a coin of Ptolemy I (Reg. No. 4743), one of Antiochus III (Reg. No. 4817), and one of Ptolemais-Ake (Reg. No. 4744, 2d Cent. B.C.). Thus it was left uncertain to which of the two series of rooms, the earlier or the last Preherodian, these lower rooms belonged. In either case, they must have formed the cellar of the house to which they belonged. The fall of the rock made space for a cellar here but not further north, while the Greek Fort Wall offered a ready-made north wall. The eastern wall of 941 was partially preserved and rested on an Israelite wall.



These Preherodian houses along street Alpha originally continued southward over the site of the vault (1908). Under the vault, the formation of the rock as modified by the Israelite cuttings made room for the construction of another cellar in Insula I. The vault cellar showed the walls which must have carried the walls of two rooms above and those of the street. The wall under the eastern side of the street showed no opening, but the western wall had a doorway into each of the two subterranean rooms. In the narrow room under the street was vault cistern 2, which had been filled up in the Herodian period. These rooms must have been roofed over, probably with wood, and entered by one or more stairways, but the construction of the Herodian vault and subterranean corridor had destroyed all traces of either roof or stairway. Vault cistern 1 served the house across the street in Insula II and had its opening on the upper level.

In addition to the vault cisterns, the Preherodian floors in S9 were cut by three cisterns, one in Insula II and two in Insula I. Of these, No. 2 (opened in 1908) in room 912 was last in use in the later Roman period. Its mouth was above the Preherodian floor, and its contents included two Roman coins (Reg. No. 635, Hadrian; 637, Constantius II) and one of Tyre (636; see p. 21, Nos. 635-637). Cistern No. 1 was in room 909 (Insula I), opened on the Preherodian floor, and contained a bronze bucket (Reg. No. 4296), an iron spear-point (Reg. No. 4406), Hellenistic water-jars, and a coin of Antiochus VIII and Cleopatra (Reg. No. 4821). Cistern No. 3 in room 916 contained the usual Hellenistic pottery.

The Preherodian rooms were filled as usual with black debris. The coins were: one of Alexander Jannæus (Reg. No. 4144), two of Antiochia ad Orontem (Reg. Nos. 4129, 4172), one of Antigonus-Mattathias (Reg. No. 4164), and one of Tyre (Reg. No. 4143, 35 B.C.). Over this lay debris of decay with some fragments of wall and pavement, which according to the contents of cistern 2 are of the later Roman period. Over all was agricultural earth, as in S6. The upper debris contained a coin of Herod I (Reg. No. 4120), one of Geta (Reg. No. 4073), one of Elagabalus, Reg. No. 4110), and one illegible Roman coin.

#### 10. SUMMIT STRIP 10 (S10)

S10 was a small strip along the northern side of the Greek Fort Wall. The agricultural earth and the debris of decay crossed the wall at a depth of two metres and contained Ptolemaic (Reg. No. 4710), Seleucidan (Reg. No. 4717), and Roman coins (Reg. Nos. 4755, 4756). The northern face of the wall was six metres high, embedded in a bank of debris consisting of about three metres of black, one and a half metres of mixed black and yellow, and about half a metre of packed yellow debris. In this bank no construction trench was discoverable except in the yellow debris. It was clear that the first three metres of black debris had been removed after the construction of the wall, and the space refilled, probably with the excavated debris. At the same time the next metre and a half had apparently been stirred up by the removal of stones (Israelite?). On the west the lower courses of an Israelite wall were found embedded in the packed yellow debris.

The upper black debris contained the usual series of Preherodian objects, but the mixed debris contained an older series as in S3 cistern in street and in S3 north of street, including Israelite and Post-Israelite potsherds. The packed yellow debris yielded only small Israelite potsherds.

#### 11. SUMMIT STRIP 11 (S11)

Strip 11 in the northwestern corner of the summit was the last one to be excavated and was not completely finished, owing to lack of time. The Roman NW tower could not be removed, and while the plan of the Greek bastion was clear enough, the lines of the underlying Israelite walls were not traced.

As regards state of preservation, Strip 11, like all strips west of the summit, was divided into the area of the fort walls and that inside the fort walls. The former includes S11-1 and S11 z, y, x, v; the latter, S11-2 to 23. But the floors of the Preherodian rooms (Insula I) were on a low level and broken by two long foundation walls, parallel to the subterranean corridor and of Herodian date.

The rock formed a rough ridge, crossed by Israelite walls (see Plan 5) and dressed on the west and the north to take other walls of the same date. On the east was a cleft underlying the northern half of the subterranean corridor. In the western side of the cleft was the entrance to a large cave extending under S11-3. The cistern in S11-3 descended through the roof of the cave and was separated from the unoccupied part of the cave by a heavily cemented wall of masonry. The rest of the cave was filled with yellow debris, containing many Israelite potsherds and a blue paste scarab (Reg. No. 4857). In the mouth of the cave was the same debris, containing Israelite potsherds and among them one with an incised Israelite inscription (Reg. No. 4925). See p. 238, No. 65.

The surface of the rock was badly weatherworn and irregular. The depressions contained packed yellow debris, but over the rest of the surface the debris had been stirred up almost to the rock. There were several walls built over the Israelite walls, and these resembled the early Post-Israelite walls in S8 and S7. Over this came the layer of black and yellow debris which underlay the Preherodian floors. This layer was broken by both the Preherodian and the Roman walls. Under the Preherodian floors was found a great mixture of objects of Israelite, Greek, and Ptolemaic dates. The three coins found were all Ptolemaic (Reg. Nos. 4874, 4867, 4870). The most noteworthy object was a small pottery vase containing seven pieces of heavy gold (under the floor in S11-2, Reg. Nos. 4807 and 4808). The cisterns contained Hellenistic objects, including a coin of Alexander II Zebina (Reg. No. 4838, cistern in room 3). The debris above the floors yielded the usual Hellenistic objects. The Roman floor was not preserved except in the western street, but alongside the eastern edge there was a drain which must have been just under this floor. Otherwise the black filling of the Preherodian rooms merged with the agricultural earth. Near the NW tower, the rooms 11, 12, and 15 appeared to belong to the Roman period; but the con-

tents of the debris under their floors was the same as in the southern rooms, as if their mud-floors had been laid down directly on the old filling of the Preherodian houses. Between the western wall of room 15 and the eastern street wall was a jar handle with a Roman stamp (Reg. No. 4902).

In the surface dirt of the Roman street was a coin of Herod I (Reg. No. 4770, 37 B.C.). About 30 cm. lower was a second trodden surface. The earth between contained only Hellenistic objects, so that it was clear that the upper floor was the Herodian street floor. The lower surface was probably the construction surface of the same period. Underneath it the latest coin (the only one above the top of the Greek Fort Wall) was of Antiochus IV (Reg. No. 4794). About 220 cm. below this, came the Preherodian street floor, 95 cm. below Insula I. The top of the Greek Fort Wall was over 350 cm. below the Roman floor, and from this point our street trench descended through the construction trench of the Greek Fort Wall, yielding Hellenistic or Greek and some Israelite objects down to rock. On top of this wall was a long Preherodian wall, probably running along the Preherodian street which bounded Insula I on the west. Towards the north the Greek Fort Wall had been repaired in a careless manner, but could be followed under the masonry of the Roman NW tower.

Although the NW bastion of the Greek Fort Wall could not be completely excavated, its form was clear. There was no evidence of a strengthening tower as in the W bastion, but the Roman tower descended to rock and may have concealed evidences under its mass. The Roman tower had been half torn away for building-stones, but the rest was too considerable to be removed in the time at our disposal. The Greek Fort Wall was followed eastward under the subterranean corridor, but the Roman wall was broken away, so that its joint with the corridor could not be established. The corridor probably passed under the Roman wall.

## 12. LOWER TERRACE (L. T.)

In Israelite times the rock in L. T. was laid bare and partly cut away by quarrying. The edge of the cliff was fortified by a heavy wall, 8-10 metres wide, set in a trench cut in the rock. On the north, the walls of the Ahab palace were clearly identified. In the space between the Ahab walls and the fort wall were traces of other massive Israelite walls which could not be definitely assigned to any one of the three Israelite periods. But one of these walls seemed to be the foundation of a round tower like that of the Third Palace in S5, and indicated that the Third Palace had covered this area. To judge by the face of the Ahab wall in GH 16, the floor-level of the Ahab period was about 427.50 m. This floor-level would have required a considerable deposit of earth over the rock below, as far as the inside of the fort wall. Now, the Israelite Fort Wall standing on the edge of the cliff was easily destructible, owing to the facility with which the stones could be thrown down the cliff; and it is therefore probable that the wall was destroyed by the Assyrians. Once the wall was down, the rains of one winter would suffice to wash away the greater part of the Israelite filling above. Thus we may safely

assume that in the Post-Israelite period there was only a moderate deposit of earth on L. T. This deposit was further cut down to within a metre of the rock when the rubble pavement (see below) was laid.

Some time later, probably during the early Hellenistic period, a stout wall was built northwards across the area, and a rubble pavement laid up to both sides of it. This pavement covered the whole middle part of L. T., and seemed originally to have extended much further in all directions. It was about 50 cm. higher on the east of the stout wall than on the west, and sloped markedly towards the edge of the cliff. This pavement was like that in front of the Hellenistic Fort Wall at the Western Gate, and probably of the same date. In L. T. the pavement rested on Israelite debris, which had undoubtedly been leveled off to receive it. It was found covered with 20–50 cm. of coals and ashes, indicating a considerable local conflagration. The floor of the Preherodian terrace on the north of the pavement and that of the Herodian terrace on the south fell below the level of the pavement. Thus it was only in the middle of the area that anything could have been preserved of the time between the period of the pavement and the last Preherodian period; and in fact the only remains found (room 39) of this intermediate period were above the lower part of the pavement, west of the N–S wall. Here above the thin layer of burnt matter a layer of black debris contained the northern part of a large cemented basin (room 39). The walls rested in the black debris, and the floor of the basin was about 90 cm. above the rubble pavement. Very few objects were found below the basin, but among them was a Rhodian jar handle (Reg. No. 2066). Above the basin lay disturbed black debris rising about 150 cm. to the floor of the Preherodian terrace. This earth had clearly been leveled out from the north, and contained Rhodian jar handles, black-glazed potsherds, one black-figured fragment (Dis. No. 1524), a stone scarabæoid (Reg. No. 2022), and a coin of Alexander the Great (Reg. No. 2052). In and above this debris forming the Preherodian terrace stood walls which passed through the Herodian terrace wall and connected with the Preherodian house walls in L. T. 4–5. Above the rubble pavement east of the stout N–S wall, disturbed black debris rose to the floor of the Roman terrace, and even the Preherodian walls had been destroyed.

Thus when the last Preherodian town was built, the layer of debris over the L. T. area was still comparatively thin (between one and two metres), and sloped away with the rock towards the cliff. This slope was prepared for the Preherodian buildings by cutting away the debris in L. T. 4–5 down to the hard yellow bank, and leveling out southwards to the rock scarp above cave No. 1. South of the rock scarp, the Preherodian houses occupied the rock trench cut for the Israelite Fort Wall.

When the Herodian temple was built the Preherodian houses in L. T. appear to have been confiscated along with the rest of the summit, partially destroyed, and filled with the usual black debris. The most obvious source of supply for this sort of debris in the neighborhood was the Preherodian terrace in the southern part of S2. The excavation of the construction trenches of the apsidal build-

ing must have yielded an enormous mass of earth which would have been most conveniently thrown out over L. T. The resultant slope was terraced by means of two retaining walls, one between L. T. 4 and L. T. 3 and the other between L. T. 3 and L. T. 2. The southern face of the apsidal structure was dressed, i.e., exposed to view, down to a line 280 cm. above the floor of the Preherodian street Lambda. This line along the base of the superstructure appears to give the level of the upper Herodian terrace, or at the least the level of a street which bounded it on the north. But we found the terrace denuded below this level. About 50 cm. below the dressed face of the wall, a weathered surface sloped south to a hollow over the Preherodian rooms in L. T. 5. This surface was covered with a great dump thrown out over the wall in the course of comparatively modern agricultural operations, and the hollow was filled with the talus of stones and coarse material from the dump.

The eastern boundary of the Herodian terraces was formed by a wall running north and south (see Plan 8 J 16-19, noting the joint at the eastern end of the upper terrace wall in J 17). The ground east of this N-S wall was lower as far as we went eastward in L. T. E. Thus the N-S wall marks the eastern limit of the dump from the Herodian excavations in S2, for there were no large Herodian buildings in S1 to yield such a mass of construction debris. On the high terraces only fragments of Herodian walls were found in L. T. 3 and two rooms in L. T. 2 (see Plan 2), but on the lower level east of the N-S wall there were five rooms (21-25) built against the wall. In room 23 a stair led to the upper story, which was no doubt on a level with the buildings on the Herodian terrace in L. T. 4-5.

During the Severan period, the same topographical configuration persisted. The hot-bath (room 50, calidarium) on the second terrace was built and probably connected with rooms 21-25. A second floor higher up and certain coins found in connection with this floor show that these rooms were again in use.

During the Byzantine or Arab times, building-stones were removed in abundance from this area as shown by the filled holes; and in consequence the buildings on the upper terrace (L. T. 4-5) were removed, as well as the upper parts of the calidarium and of the buildings lower down. Finally the agricultural terracing resulted in the modern surface shown on Plan 3, section A-B.

### 13. SUBTERRANEAN CORRIDOR (S. C.)

From the vault (1908) the subterranean corridor ran out northwards to an entrance beyond the limits of our excavations. The southern end was originally designated S8 a, north. Adjoining this on the north, the corridor passed through S9 addition a-d, then through S11 v, and finally S9 north addition. The walls were preserved to the spring of the roof-vault from the southern end as far as S9 c. Further north the west wall was gone and the east wall was denuded to the lower courses. The stones of the vault had apparently been removed, for we did not find them either in the debris or on the floor. The corridor was filled with dumped debris, the lower stratum (talus) of which contained a great

many building stones but no stones from the vault. This filling was clearly the result of agricultural leveling. The earth contained objects of all the Hellenistic and Roman periods, including the inscribed Greek pedestal (Reg. No. 4731), one Ptolemaic coin (Reg. No. 4759), one Maccabæan (Reg. No. 4752), and one of Herod Archelaus (Reg. No. 4812). In the floor dirt (debris of occupation), was a coin of Herod I (Reg. No. 4791), one of Constantine I (Reg. No. 4758), and an unidentified Roman coin (Reg. No. 4793). In the cistern in the southern part of the corridor, one coin of Antiochus IV (Reg. No. 4789) was found.

The reconstruction of the corridor, its Herodian and later forms, are dealt with in Part III. Under the floor dirt of the corridor the debris was yellow Israelite from the south to within a few metres of the Greek Fort Wall. In the extreme southern part the floor rested on the filling of the cleft (broken-down cave), which extended westwards under S8-840. From the northern side of the vault (1908) to the cross wall under the floor in D 6 (Plans), the floor rested on about 50 cm. of hard yellow Israelite mason's debris, which was itself on the rock. The cross wall is built against an ancient rock scarp, and the Israelite wall just north of it stands against another scarp (see Plan 4, section C-D). By these two scarps the rock descends to a point 350 cm. below the floor of the corridor, and slopes gently away to the Greek Fort Wall. This lower area was filled with yellow Israelite debris, which in the lower two metres was extremely hard (at first mistaken for rock), while the upper part had been disturbed. Nearer the Greek Fort Wall, opposite S9-941, the debris was black, and indicated the westward extension of 941, but no walls of the later period were found.

#### SUMMARY

The salient features of the history of the accumulation of debris at the summit are the following:

- (1) The rock was laid bare in the Israelite period.
- (2) The Israelite palaces had floors high above the rock, partly to equalize the inequalities of the rock surface. The foundations of the floors consisted of compartments separated by stone walls and filled with yellow debris. This foundation filling formed the basis of the accumulations all over the summit.
- (3) The Israelite palaces, in general, were not destroyed below the floors.
- (4) The Greek Fort Wall was originally built before the summit had suffered serious denudation. The floor of its day was about a metre over the Israelite floor. The Greek Fort Wall was maintained down to the destruction of Samaria by John Hyrcanus. During this period denudation was prevented by the superstructure of the Fort Wall, and accumulation could have taken place only slowly in the form of mason's debris, debris of occupation, and debris of decay.

- (5) The complete destruction of the superstructure of the Greek Fort Wall by John Hyrcanus exposed the ruins of the last Hellenistic town and the upper deposits of debris to rapid denudation. The forty years of winter rains between this destruction and the work of Gabinius seem to have lowered the summit practically to the top of the remains of the foundations of the Greek Fort Wall. The last Preherodian town (that of Gabinius) was built over the lines of the Greek Fort Wall, showing clearly that the wall was buried under the surface of decay at that time.
- (6) At the time when the last Preherodian town was built the denuded surface of decay was lower than any floor or surface of the Hellenistic period. This surface was then made into building terraces by cutting down and leveling out, causing further destruction and disturbance.
- (7) The last Preherodian town was confiscated by Herod and broken down only so far as was necessary to the Herodian building operations. These operations caused the removal of all deposits over considerable areas (S6, Vault, subterranean corridor), the penetration of all deposits to rock by the foundation trenches of the great walls, and the covering of certain areas with a thick protective layer of filling (area of temple cella, etc.). The construction of the heavy wall around the edge of the summit not far from the lines of the Greek Fort Wall re-created a retaining wall, which served again to hold up the debris, but at a considerably higher level.
- (8) The restoration of the temple in the days of the Severan colony yielded a certain amount of earth from the construction trenches, which increased the height of the deposits on the west of the temple. Elsewhere the increase is mainly the slow accumulation of debris of decay.
- (9) During the Byzantine and Arab times the summit appears to have been a mass of ruined walls and fallen stones. The watch-tower in the SE corner of S2 and the stable in the vault were the only signs of occupation. Stones were undoubtedly taken from the summit for many buildings, and continued to be taken down to the time of our arrival. The agricultural terracing shows at least two series of operation, the earlier represented by rough field walls about a metre below the present surface. The later terracing is comparatively recent.

PART III  
ARCHITECTURAL REMAINS

BY

CLARENCE STANLEY FISHER



## CHAPTER I

### ISRAELITE PERIOD

[880-721 B.C.]

The summit — Palace of Omri — Palace of Ahab — The Ostraca House — Palace of Jeroboam II (?) — Masons' marks — Outer walls of the Israelite city — The west gate — The south wall

#### 1. THE SUMMIT

The original summit of the hill of Samaria was just east of the NE corner of the main building of the Herodian Temple (Plans 1 and 2). It was approximately 437 m. above mean sea-level.<sup>1</sup> From this point the rock sloped unevenly on all sides. Towards the north the surface of the rock was traced by our excavations for a distance of 60 m., and at this point its level was only a little over 5 m. below the summit. Not far beyond this point, however, there must have been an abrupt descent, as the present surface here drops away at an angle of about 45° for a perpendicular depth of 15.5 m. On the west, at a distance of 75 m., the rock surface was nearly 9 m. below, while towards the south, 120 m. away, was the edge of the rocky cliff, 21 m. below the summit. Here the rock fell away at an angle of 45° to 20 m. below the edge. (See Plan 3, section A-B, and Plan 4, sections C-D and G-H.) The present surface towards the east slopes much more gradually, and is terraced in several stages of 1 to 2 m. each; no considerable drop is visible for a distance of 170 m. This summit made a natural and impressive site for the palace (Pl. 1 a, b).

#### a. THE PALACE OF OMRI (ca. 880 B.C.)

When the plan of the building had been determined upon and its site marked out, the rock outside its area was quarried away along the exterior lines of the building, leaving a solid core of rock with a perpendicular scarp, as a base for the structure.

Only the western part of the palace has thus far been cleared, so that only along the west and part way along the south side has this rock scarp been exposed in a continuous line. Just to the north of the Roman altar in GH 7 was a similar vertical scarp nearly 4 m. in height, which, although it had not quite the same orientation as the system of walls in the interior of the building further south of it, belonged to this period, and could be safely identified as the northern side of the palace (Pl. 19 b 1).<sup>2</sup> West of the altar this scarp turned towards the south

<sup>1</sup>All levels were calculated from the base point given by Conder and Kitchen in their survey of Palestine for the Palestine Exploration Fund. This gives the highest part of the hill, i.e., the modern cultivation surface, as 443 m. above mean sea-level.

<sup>2</sup>The walls belonging to the various periods are marked on the

plates uniformly as follows: 1. Omri constructions; 2. Ahab; 3. Jeroboam II; 4. Israelite city wall; 5. Post-Israelite; 6. Greek Fort Wall; 6a. Greek Fort Wall reconstructions; 7. Greek walls; 8. Preherodian town; 9. Herodian walls; 9a. Herodian walls restored in Severan period; 10. Severan walls; 11. Arabic walls.

in line with the scarp in G 11-14. This was the northwest corner of the Omri building. The lower part of this north scarp, however, continued to the west, and on it, running parallel to the western face of the palace, was one of the characteristic rock trenches in which lay two large Israelite blocks, one bearing a mason's mark (see p. 119 e 7). This low scarp disappeared under the edge of the trench, but the face of rock forming the lower part of the eastern wall of the vault west of the staircase was probably its continuation to the south. This would then form part of the later Ahab addition. These northern rock-faces which appear to belong to the Ahab addition could not be connected directly with the rock-faces of the Omri building to the south, owing to the enormous masses of masonry composing the foundations of the staircase, portico, and vestibule of the two successive Roman temples, which completely hide any remains existing below them.

Where the rock scarp reappeared from under the Roman masonry, it was over 5 m. inside of the line of the face next the altar. It ran approximately  $11^{\circ} 45'$  west of south<sup>1</sup> for 15 m., where it turned out at a right angle for 5.2 m., then turned again parallel to the former face and in line with the face next the altar. This angle of the scarp (G 11) is seen very clearly in Pl. 8 a 1, c 1, d 1. The face continued in this direction for 23.8 m. to the southwest corner (Pl. 11 b 1). From this corner it ran east for 6.5 m. and then turned out south, being lost under the masonry of the Greek Fort Wall. It reappeared in L. T. E. (LM 14), running towards the east 7 m. outside the line of the face next the corner. Somewhere under the Greek Fort Wall, therefore, was another corner of the building. The length of this face of the scarp was 22.5 m., and at its eastern end it turned in again for 2.5 m., then ran towards the east for an undetermined distance.

In the subsequent Israelite periods the rock was often scarped to receive facing walls or cut away to give better foundations, but never so thoroughly as in the Omri period. We can safely say, therefore, that this elaborate rock scarping marks the area, and to a large extent determines the plan, of the original Omri structure. In the interior, even where all masonry has been removed, the trenches which were cut in the rock to receive the footings of the walls enable us to trace readily the complex of walls.

*Plan*—The plan was one very common in Oriental countries: a series of open courts around which were grouped the various rooms (Plan 5 and Pls. 2 b; 3 a, b). In the part thus far excavated no trace of the entrance has been found.

No. 7 was a large court, 17 m. long, 8 m. wide at the east end, and 9.5 m. at the west. In no part of it was more than a single course of the foundations *in situ*, and this only at the southwest corner and part of the north and south sides; but the lines of the rock trenching were perfectly clear on all the sides. The great trench cut for the north wall is shown in Pl. 3 b 1, 1, and Pl. 4 d 1. Near the middle of the north wall and 2.5 m. from it was a circular hole in the rock 70

<sup>1</sup>The magnetic bearing of the north and south line upon which the plans of the summit are based was taken in July, 1909, when the magnetic north, according to data supplied by the

American College at Beirut, was  $1^{\circ} 30'$  E. of true north. The bearings of rock-faces, owing to unevenness, can be given only approximately.

cm. in diameter which opened into a chamber cut in the rock platform of the palace (Pl. 4 c, at arrow). Just to the southeast of the opening was a deep cut in the rock 30 cm. wide by 79 cm. long and 58 cm. deep. The chamber was 4.5 m. by 5.9 m., with its axis east of south. Its roof was 1.4 m. thick, and the bottom 5.5 m. below the rock level of the court. The rock in which it was cut was very poor, with yellowish limestone strata, and irregular patches of flint running down towards the west. It was very rotten, and the original wall surface of the chamber had flaked off in large pieces. A mass of earth containing numerous animal bones (cf. p. 62) filled the chamber nearly to the roof. (For diagram of this accumulation see Fig. 7, p. 39.) In the middle of the west end was a doorway 1.25 m. wide and 2.07 m. high, its sill being 1.5 m. above the floor. This opening had been blocked up with rough squared stones laid in courses with mud mortar. When these were removed the door was found to admit to a perpendicular shaft extending to the surface. This was 1.73 m. wide and 2.43 m. long, and, while cut square at the east, or door, side, was rounded off at the west. At a depth of 92 cm. below the upper rock surface on the north and south sides of this shaft were ledges 60 cm. wide, undoubtedly cut to support slabs of stone, which, when *in situ*, converted the bottom of the shaft into a tunnel. The tunnel continued through the rock 3.4 m. westward to the face of the rock scarp, where it was blocked with a rough rubble wall. The mouth of the tunnel opened into room 12 of the Ahab addition through a doorway built in the masonry.

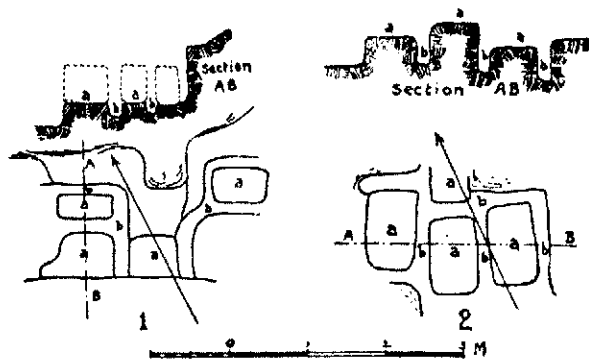
No rooms to the north of this court have been found. To the south, however, lay a large group of rooms, which could be traced by remaining fragments of their walls and by the rock trenches clear to the southern boundary of the Omri palace, as given by the southwest corner of the scarp. All these rooms seemed to belong to a distinct group, lighted by a single smaller court, No. 6. There was no way of determining this absolutely, as the masonry consisted usually of one course, in no case more than three, and was only the rough foundation wall, the superstructure being entirely destroyed. The actual floor-level of all these Omri rooms must have been at a level from 1 m. to 3 m. above the rock surface, according to the slope. This small court was 8.4 m. by 9.25 m. and connected with the larger one by a passage, No. 1, 3.2 m. wide by 5.3 m. long. Adjoining it on the east was No. 2, 4.2 m. by 5.3 m. This room may have opened directly into the large court 7, but more probably opened into No. 3. The latter extended along the whole east side of the smaller court, and was 4.2 m. wide. From its position and size we may assume that it was the chief room of the group, and that room No. 9 to the south, and the companion room No. 2 on the north, were connected with it. On the opposite side of the court were two small rooms, Nos. 15 and 16, of whose walls only fragments were *in situ*. West of the passage 1 was a large room, No. 10, corresponding in size to No. 17 at the southwest corner of the court. This group of rooms filled the wing, which projected from the west side of the palace. Of the similar wing on the southern façade (LM 14) only the exterior face has been cleared, so that nothing of its interior arrangement was found. The rooms here, however, could have been reached only from the court 6; and room

18, which was of the same size, and in line with the passage 1 connecting the former with the larger court 7, was probably a similar passage. The wall between Nos. 2 and 3 continued towards the east, but ceased after a few metres. Its western end was bonded into the other walls, but the wall itself swerved slightly to the south-east. Nothing to the east of this point has been cleared.

To the west of the palace, however, near the middle of the area covered by the later Ahab courtyard (DE 11) there was part of a building clearly belonging to this period. Its walls, 1.25 m. thick, were of well-laid rubble containing many large blocks of yellow limestone (see Fig. 42, DE 11). Only one course remained, laid on the rock surface and embedded in the lowest yellow stratum. This building of the Omri period was destroyed when the Ahab addition was constructed, and its remains were covered by the courtyard filling and by the northern part of the Ostraca House (see reconstruction of the Ostraca House in Fig. 42).

*Materials* — The material used for the walls was a poor quality of yellow limestone obtained from the site of the palace and the adjacent slopes of the hill. The cutting away of the rock around the palace to form the scarp on which it stands must have supplied most of the material for the walls of the first structure, and the advantage of obtaining an ample supply so close at hand must have been one of the main incentives for adopting the platform scheme. This stone when first quarried has a soft, cheesy texture, but rapidly hardens on exposure to the air. Throughout the rock were numerous fissures, nodules of flint, and pockets of rotten stone, so that stone of sound quality was not to be found everywhere. As a result, there were no large quarries on the hill outside of the summit area, but a considerable number of scattered small ones.

*Quarries* — These small quarries followed the natural cleavage lines of the rock, which on the summit ran almost exactly northwest to southeast, curving more



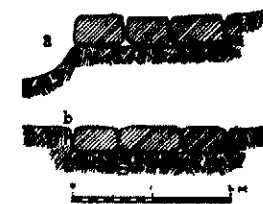
18 (on left). Small quarry in H 15.

19 (on right). Quarry in HJ 18.

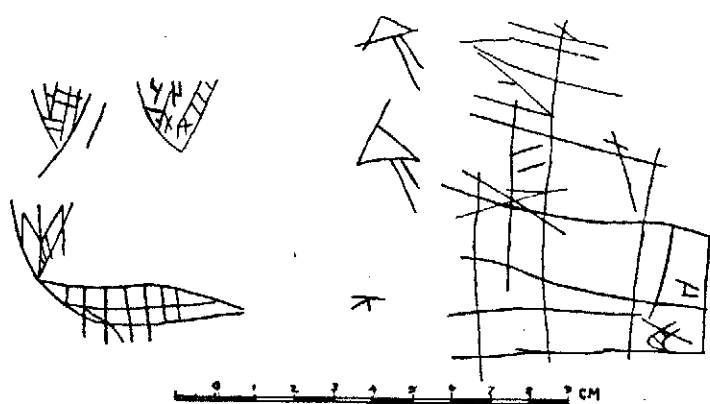
towards the east on the lower eastern and southern slopes, and descending towards the west. During the progress of clearing the site a number of these quarries were uncovered. Several single stones partly quarried were found, as in J 13 and M 16, but at two places groups of blocks were found in various stages of removal. One of these was in H 15 (see Fig. 18), just inside the southwest corner of the south Ahab wing. The other was below

the earliest living level in L. T. room 20, in HJ 18 (see Fig. 19, Pl. 15 b + and Pl. 15 c). Channels, b b, wide enough for the workman to use his arm and chisel in, were cut around the desired blocks, a a. This groove was sunk to the thickness of the stone, ca. 50 to 70 cm., and the block was then split off, either with a sudden blow along the cleavage lines, or with wooden wedges inserted and then wet with water. Where the rock was sound several long layers of such blocks could be cut away. In Fig. 18, section A-B, several blocks have been so removed and the grooves carried below their lower faces.

*Construction* — Before the erection of the actual walls began, the surface of the rock was cut to receive them. When the rock was comparatively level this took the form of a shallow channel (Fig. 20 b), but on a slope the cut was a sort of ledge or step (a) with a level base for the masonry. Usually the cuts were not over 30 cm. deep, but where the rock proved to be rotten or badly fissured it was removed down to good rock, and the cut filled with blocks of masonry. The best example of this was in the wall of court No. 7 (J 10). Here the rock was quarried away over an area of 1.5 m. by 2 m. to a depth of 1.4 m. below the bottom of the regular rock channel. The hole was then filled with four courses of large blocks roughly bonded and the crevices filled with small stones and mud. Pl. 3 b shows this trench filled with masonry at a point where the



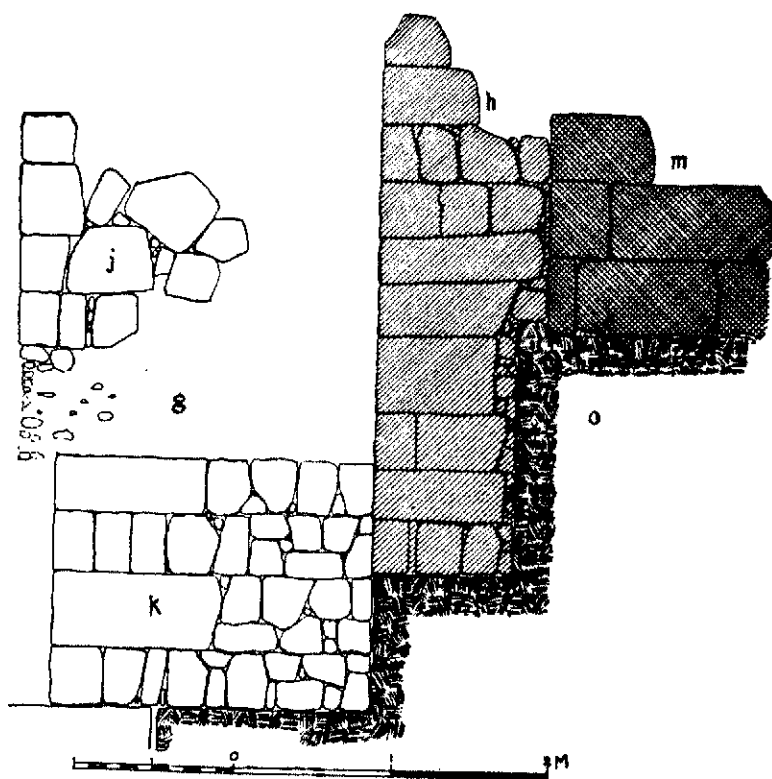
20. Rock trenches for Israelite masonry. a. On a sloping surface. b. On a level surface.



21. Scratchings on block from Omri foundations.

poor portions of rock have been cut away, and Pl. 4 d shows the same trench after the removal of the upper courses of stone. One of the blocks bore a mason's mark, T, on the under side, and on another were a number of rude drawings of animals and trees, with irregularly drawn squares at one side (Fig. 21). These markings were contemporaneous with

the masonry, and were scratched by some idle workman, probably as he was resting between work periods.<sup>1</sup> The exterior wall of the palace above the edge of the scarp was set back ca. 30 cm. from the edge, a narrow rim of rock being left to form the outer edge of a channel (Fig. 22, foot of wall m). This feature is shown clearly in Pl. 8 c, d. In c, looking towards the east, the corner of the main face of the scarp is shown, while in d the same is seen from the inside of the building looking towards the west. The channel is marked 1. At the corner all of the masonry had been destroyed, but farther along, at the right, can be seen the lower courses of the original Omri wall *in situ*. In Pl. 11 a 1 is seen a portion of the same



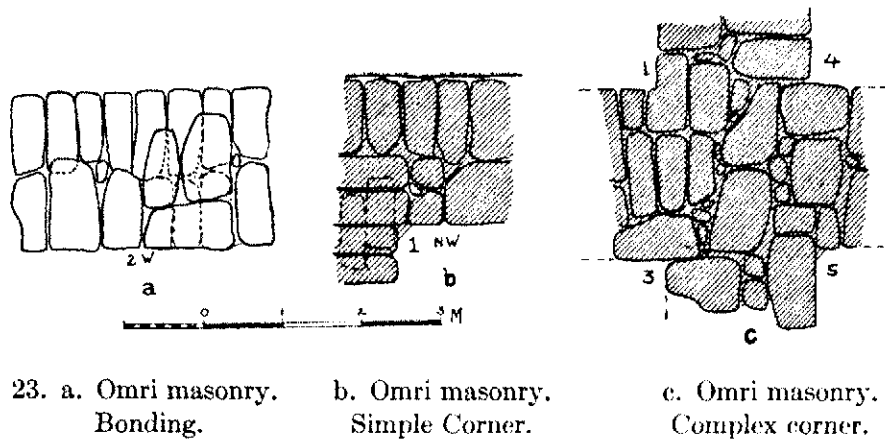
22. Section through rock-scarp and walls east of room 13 (G 12).

<sup>1</sup>A different interpretation of similar markings is given by Prof. R. A. Stewart Macalister, who considers them as picto-

rial writings made during the stone age. Excavation of Gezer I, 145.

west scarp south of the above corner, with the facing wall built against it at a later period. The outer wall was 2.5 m. thick. Its exterior was dressed smooth on the only fragment still *in situ* (Pls. 8 d and 11 a).

The interior foundations varied in thickness from 1.9 m. to 2.1 m. The lowest course was usually laid with headers, two blocks to the thickness of the wall.



These, however, varied in length, and sometimes there was a header and a stretcher in the width of the wall, i.e., the course appeared with headers on one face and stretchers on the other. Then, again, where there were two rows of headers, these often

dovetailed into one another as in Fig. 23 a. In these cases the joints of the course above were broken by placing a stretcher over the headers in the course below or simply by placing one block over two of those below (Fig. 23 a). A simple corner was formed by using stretchers, as shown in Fig. 23 b. Where four walls met the stones were laid as in Fig. 23 c. They were well bonded together, and in the example given the angle stone 1 was specially cut to bond into both walls. Pl. 2 b 1, 1 gives a general view over these foundations, and Pl. 3 a shows the wall separating rooms 2 and 3, with the angle drawn in Fig. 23 c in the foreground.

#### b. THE AHAB PALACE

*Plan* — During the Ahab period (ca. 875–851 B.C.) the area of the palace was greatly increased. While the general shape remained the same as that of the preceding building, i.e., a rectangle with offsets, the wings were increased in size and carried out further towards the west. It must now have had very much the appearance of one of the great Assyrian palaces. The original Omri structure was retained as the nucleus of the new building.

As in the previous building, the foundations were laid in rock cuttings, so that here again, where the actual walls were missing, the lines of the building could be traced. The larger part of the area excavated was occupied by the new west wing of the palace, which had a length of 95.25 m. from north to south. The orientation was approximately the same as in the previous period. The magnetic bearing of the west façade was  $12^{\circ} 45'$  east of north, and the south façade  $13^{\circ} 30'$  south of east (Pl. 26 b 2, 2.) At its north end the wall turned towards the east for 19.75 m., and then again towards the north for 16 m., forming the angle of another wing on the north similar to that on the west. This north façade was traced towards the east for a few metres only, but, judging from the plan of the rooms inside the wall, its length could not have been less than 40 m. from east to west. From the southwest corner the south façade ran east for 38.8 m., at which point there was another wing extending towards the south for 14.4 m.

(FG 15-16). Here in the exterior angle was built a large rectangular tower of solid masonry, 12.5 m. by 16 m. (Pl. 9 b 2, c 2). Apparently it was not attached to the enclosing wall, for along its north side there was a space 1.1 m. wide between it and the main wall, and on its east side this space was 3.55 m. At a later period the latter space was blocked up at its north end by a wall of well-jointed masonry, like that of the Ahab period. The plan suggested that here had been originally one of the entrances to the palace; judging from its size and position, a sort of postern. This consisted of a small gateway in the wall, approached by a passage which was protected on the one side by the great tower and on the other by the side wall of the south wing. Unfortunately the enclosing wall at this point had been entirely destroyed. During the early Post-Israelite period several rooms were built across the inside of the wall opposite the passage. The west face of the south wing was built upon a rock-scarp, and further to the east, in LM 14, were fragments of several division walls built against the old Omri scarp, their ends being built partly into vertical channels cut in the rock to receive them. At several points along the west façade the wall rested upon a rock-scarp (Pls. 40 d 2, e 2; 41 a 2; and 54 e 2). Elsewhere, according to the undulating surface of the rock along the line of the wall, it was built simply in a shallow offset in the rock.

The enclosing wall was the distinctive feature of the Ahab building. It consisted of a heavy double wall, which formed the retaining wall of the great artificial platform, and on this the new wing of the palace was built. The level of the pavement inside the building was nearly 7.5 m. above the surface of the rock outside the southwest corner of the wall. (See Fig. 25 on p. 103.) The outer wall was 2 m. thick, and a space, varying from 2 m. along the west side to 2.3 m. along the south, separated it from the inner wall, to which it was tied by cross walls at regular intervals. This inner wall was from 1 to 1.1 m. in thickness (Pl. 26 b, c 2).

The inner and the transverse walls were the foundations of a colonnade or a row of rooms, built against the outer wall and extending around the court, which occupied the greater part of the area of the new extension. At the southern end of the west wall these rooms were arranged regularly, two small square rooms alternating with a longer one, whose length was twice its width, the width of all being the space between the inner and the outer walls. Along the northern half of the wall all traces of these walls have been destroyed, but apparently this regularity was carried out to the northwest corner, and in the restoration of the plan (Plan 5) I have indicated it thus. With the rooms arranged symmetrically from each end, there is a narrow space left in the centre, which may well represent the western entrance. Along the southern façade the same feature continued, but the rooms were not so regularly placed as on the west. Traces of them were found inside the southwest angle of the south wing, while farther to the east the wall was not traced. On the northern façade a similar row of rooms continued as far as the extreme northwest corner, as indicated by the fragments of walls found in E 4 and E 5, which are shown on Pl. 21 a, c. Beyond this point, however, the plan could not be seen clearly, owing to the mass of the Greek Fort Wall built across this part of the earlier building.



Between the old Omri scarp and the new outer west wall a second long wall was built parallel to the latter and 24 m. from it. This formed the east wall of the new court and the west wall of the main Ahab building, and extended nearly the whole length of the western wing. Towards the south it was traced nearly to the main wall, but its connection with this wall had been destroyed by the Greek Fort Wall and Roman walls (Pl. 34 d). Towards the north its lower courses were *in situ* to F 9, beyond which point it was destroyed by the vault west of the Roman staircase. On the other side of this we found no trace of it, a wall which there continues in line with it being of less thickness and of quite different masonry. The northern limit of the court, therefore, lay somewhere below the present position of the vault in F 8 (Pl. 38 a, b 2). This whole area was filled in with debris up to the required level, shown in Pl. 33 f 2 and Fig. 43 on p. 115.

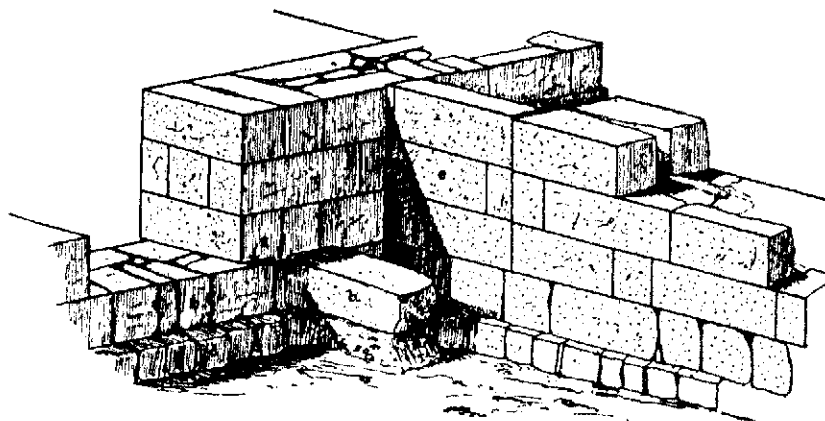
There can be little doubt that this large rectangular space was intended originally to be a great open court of the palace. But shortly after the new wing had been begun, and before the court was filled in, it was decided to utilize a part, at least, of the space for a series of large store-rooms for the wine and oil brought to the palace as revenue. The foundations of a nearly complete group of rooms occupying the entire southern end of the area were excavated, and from the large number of memoranda for wine and oil inscribed on potsherds which were found on its floor, it has been called the "Ostraca House" (see p. 63). This was not built directly against the enclosing wall, but a narrow passage was left between it and the west and south outer walls and the west wall of the main building. (See Pls. 33 f and 34 d, and Figs. 42 on p. 114 and 43 on p. 115.) Probably a similar group of storehouses occupied the northern end of the court, but this whole space was afterward filled with the foundations of successive periods of dwellings, destroying any foundations which may have been there before.

The northern wing likewise contained a court, surrounded by rooms. In this was a large pool or reservoir for water immediately to the south of the series of long store-rooms. The pool was 5.2 m. wide and 10.2 m. long, and parallel to the northern façade. During some subsequent restoration of the palace its size was reduced to 4.6 m. by 6.3 m., the bottom being slightly raised at the same time by a new coating of cement (Pl. 21 a 2).

To the east of the great court, many new rooms were constructed around the Omri rock-scarp. Presumably these were arranged, as in the earlier period, as groups of apartments opening on to small courts, but only fragments of the walls and pavements remained. An exception was in the re-entrant angle of the scarp in H 11. Here were the remains of two small rooms, 11 and 12, with several courses of the superstructure still *in situ*. The west wall of these rooms was set back inside the line of the scarp in order to bring it even with the face of the Omri masonry, and had evidently been built to conform to it. West of the wall was a well-packed earth floor 1.38 m. above the level of the outer court. A door 1.25 m. wide led to room 11 (Fig. 24). The sill of this door as preserved was 2 cm. below the earth floor outside, but originally it had had a threshold of hard wood or stone which fitted into mortises at the bottom of each jamb.



The height of this would have brought the sill well above the outer level. (Comp. Pl. 8 a, b, c, and Fig. 36, p. 110.) Three courses of the superstructure still remained on the west wall and part way on the north wall, but on the south only the lowest course nearest the door was left, built against the face of the scarp. Probably the east side of the room had a similar wall against the scarp on that side, to correspond with the rest of the room and with the room adjoining it on the north, but no trace of this remained. If this wall had existed, the dimensions of the room would



24. Room 11, NW corner, showing door-jamb with mortise (a) for threshold, footings of wall (d), and superstructure. Also walled-up doorway (e) into room 12.

have been 2.9 m. by 3.2 m. In the north wall a door 1.25 m. wide originally led to room 12, but this subsequently had been blocked up with masonry carefully cut and dressed to correspond closely with the rest of the walls (Pls. 8 a and 9 a). Room 12 had been broken up by one of the heavy Roman walls, but considerable portions of its west and south walls were *in situ*.

On the east side of room 12, a door opened directly in line with the rock passage leading to the rock chamber under court 7 of the Omri palace (p. 94). The passage must have had its original entrance in the face of the rock-scarp, just as in the case of the two caves below the west façade of the palace. The level of the rock outside the scarp at this point was 50 cm. above the level of the eastern end of the passage, which therefore had a slight inclination. It is quite evident, from the fact that an opening was placed here so near to the face of the scarp, that this earlier rock chamber was incorporated into the Ahab plan. But the floor-level of the room, as given by the sill of the door leading into room 11, was practically 2 m. above the rock surface, so that a flight of steps must have been constructed inside the room leading down to the opening. At some time after the construction of the building it was decided for some reason to abandon this cavern and with it room 12. The door between the latter and room 11 was sealed up, and its position concealed as far as possible by matching the masonry on either side of it. This blocking, furthermore, was finished only on the side towards room 11. It was not even carried through the thickness of the door-jambs, but existed only as a screening wall one layer of stone in thickness.

To the southwest of these rooms was a pavement, No. 13, of large squared blocks carefully fitted and finely dressed off on top to form a level surface. The pavement was in addition sunk into the rock, which enclosed it on all four sides. On the east the pavement extended to within 2 m. of the old Omri scarp, ending regularly against a dressed edge of rock, the top of which at the northern end was practically level with the pavement, but rose gradually towards the south until it was 30 cm. higher at the point where it disappeared under a later wall (Fig. 13

on p. 58). In Pl. 8 c + a portion of this pavement is visible, with the wall (2) along the north side and the rock-faces on the east and south. Beyond the later wall, the rock along the east side of the pavement rose more irregularly until it joined the rough scarp ca. 90 cm. high enclosing the pavement on the south side. At a distance of 50 cm. in from the east and south edges of the pavement was the distinct trace of a wall face which had rested upon the pavement slabs and formed a casing for the rough rock-scarp behind it. On the north a part of the wall was still *in situ*, but the upper courses had been rebuilt, and at the northwest corner jutting out from this wall was a single stone, belonging to the west side. This room was 2.78 m. by 3.9 m. It was 1.79 m. below the level of the great court and 3.17 m. below the floors of rooms 11 and 12. Why this single room should have been sunk thus below the level of all the rooms around it was not clear, but the most probable explanation would be that it served as a small pool or bath, and formed part of the court or large apartment to the south. A single slab of the pavement of the latter was *in situ* 3 m. from the south side of No. 13. Its level was 1 m. below the court, and 79 cm. above the pavement of No. 13.

North of these rooms there were only a few scattered and fragmentary walls, from which it was impossible to reconstruct any satisfactory plan. All the area between room 12 and the scarp at the altar had been cut up by the series of Roman foundation walls, which were in every case carried down to rock. In G 10 was a single course of large blocks sunk in the rock, forming a foundation wall 2 m. thick. Its orientation was the same as the Ahab series, but no trace of it was found between or beyond the Roman walls. Just west of it (FG 10) was another fragment of a wall of well-bonded blocks, 1.55 m. in thickness. A few single stones were found in line with it below the Preherodian shop No. 63 in G 9. In F 9 was a part of a room. The south wall was bonded into the long east wall of the Ahab court, and ran perpendicularly to it under the west wall of the Severan portico for 5 m., and then turned north parallel to the Ahab wall the length of a few stones only.

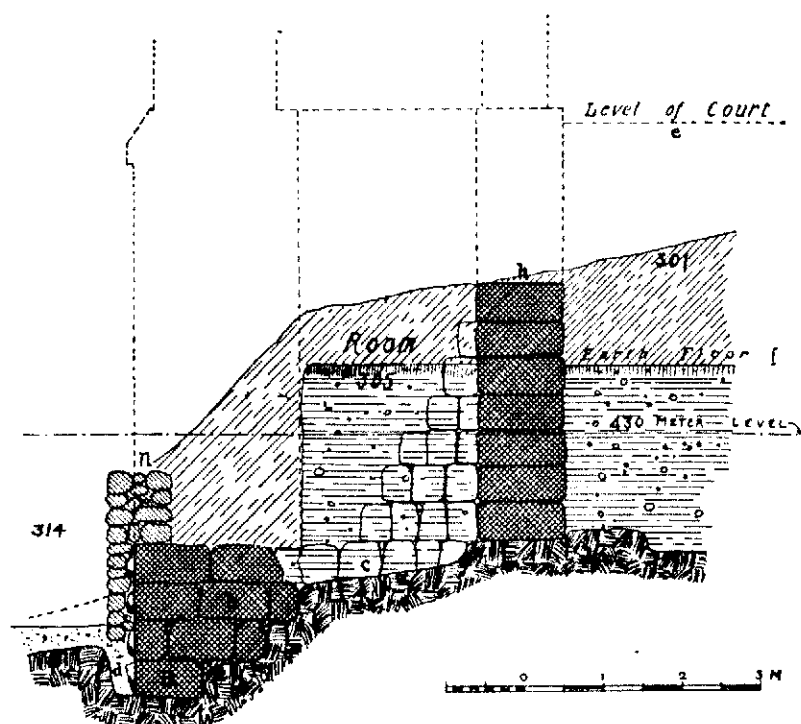
*Materials* — As in the Omri period, the material used in the walls and pavements was the yellow limestone quarried on the site.

*Construction* — The vertical scarping and the trenching of the rock in order to obtain adequate footings for the walls continued to be a feature of the construction during this period. The surface of the rock along the line of the new western façade was very irregular, varying from 427.49 m. above sea-level at the southwest corner in C 15 to 431 m. in C 12, at a distance of 30 m. further north, to 432 m. in C 9, and to 429.5 m. in C 7. These were all levels inside the line of wall. The new masonry was built upon this undulating surface, and the rock was scarped outside of it, as in the Omri building. This scarp attained its highest point in C 11, where it was slightly over 3.5 m. high.

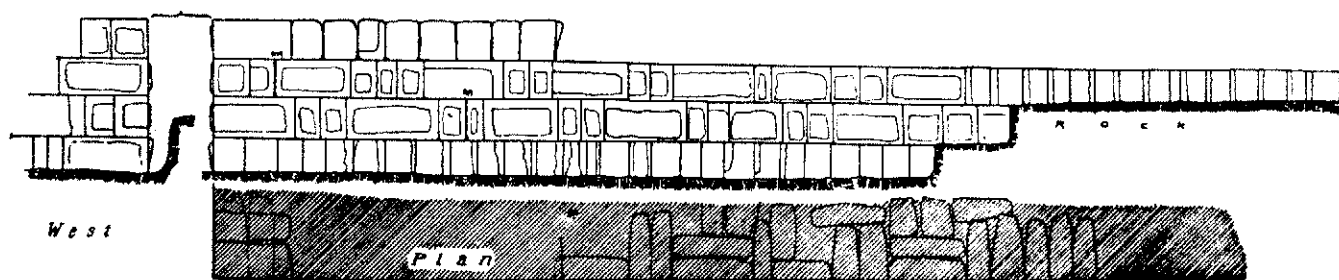
There were at several points portions of the finished superstructure of the interior walls *in situ*, and at others the well-built outer exposed faces of the heavy foundation walls in different stages of final dressing, so that it was possible to obtain a good idea of the methods of bonding, fitting, and dressing of the masonry

of this period. The double enclosing wall was a magnificent piece of work. The best preserved parts of it were at the southwest corner and along the south wing. In Pl. 25 a, b the outer and inner walls with the transverse tying walls are shown in relation to the Greek Fort Walls (6), and the Greek (7) and Roman (9) walls built around and above them (Fig. 8 on p. 41). In Pl. 26 b, c the same walls are cleared of all these later constructions. The bonding of the corner blocks, the edges of the rock trench along the south face, and the cutting of the rock for footings are clearly seen. Inside the outer face is the inner wall with the cross walls of rougher undressed masonry. The rock trenching in the foreground (Pl. 26 c 3) belongs to the following Israelite period.

The rock where the southern façade was set out had an uneven surface, with a slight slope downwards towards the south and west, but, at least near the southwest corner, no abrupt drop. There was, therefore, an absence of any scarp. A small trench, d (Fig. 25), was cut along the outer line of the wall, and in this was laid the outer row of stones, a, of the first course. These fitted irregularly into the rock, which above this level was dressed away in rough steps to receive the upper courses, b. (Comp. also Pl. 21 a and Pl. 3 b.) As the surface also sloped up towards the east, the rock had to be cut away along the line of the wall in low terraces corresponding in height to the separate courses. Fig. 26 gives a partial plan of this portion of the wall and an elevation of it. The latter shows clearly the offsets in the rock



25. Section through Ahab enclosing wall 5 m. east of southwest corner. Scale, 1 : 100.



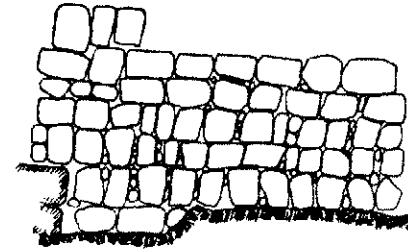
26. Detail of masonry at SW corner, Ahab wing (CD 15). Scale, 1 : 100.

surface with the courses of stone built into them. The lowest course of stone, as a result of these conditions, was laid throughout with headers set on edge. These were from 29 to 45 cm. wide and 60 to 90 cm. long, according to the space in the rock cut they had to fill. The second course was of stretchers 94 to 114 cm.

long alternating with headers on edge 23 to 35 cm. wide. The third course was laid similarly, except that at one place there were three headers instead of the usual two. Of the fourth course only the block at the corner remained, the rest of the stones, more roughly fitted and badly laid, belonging to a subsequent reconstruction of the wall, perhaps in the early Post-Israelite period. This course, as well as all the rest above it, was laid as alternate stretchers and headers. But it was a fixed rule that wherever, according to the rise in the rock, an upper course came next to the rock, it was built wholly of headers. This is clearly seen in the elevation (Fig. 26) and in the photograph of the wall (Pl. 26 b). The courses were not quite level. The top of the third course at the corner was 428.08 m.; 14 m. from the corner it was 8 cm. below this; at 16.5 m., 10 cm. below; and at 19.5 m., 18 cm. below. This course at the corner was 48 cm. high, and at 3.75 m. from the corner it was 52 cm. The second course was 52 cm. high at the corner, increasing to 55 cm. at 3.75 m. from it. The bottom course here was 45 cm. high throughout its entire length. The faces of the headers in the lowest course had, as a rule, a narrow, uneven marginal dressing on one vertical edge. This was from 4 to 10 cm. wide, and in several cases did not extend to the bottom of the stone. The rest of the face was left rough, projecting ca. 7 cm. at the top, and sloping in to the face of the wall at the bottom. In the twenty-seven stones which compose the course only seven had not this feature. These were rough-dressed all over. Two stones had the margin on both vertical sides. Another feature of this course was that the first nineteen stones from the corner were laid with this margin on the right side — all but one of the fully dressed stones are included in this number. Then there were four together laid with the margin on the left, and of these three had it only partially cut. (See Pl. 27 a.) Then there was one dressed stone, one with a partial margin to the right, one to the left, and another with dressed face against the face of the rock offset. In the second course the next offset in the rock was but 1 m. from the first, and the three stones on the rock here had the full marginal dressing. In the third course, however, at a distance of 10 m. from the corner, the masonry reached the rock terrace and changed to headers. The first seven of these were laid with the margin to the right. Then there was a narrow wedge-shaped block inserted, and from there on to where the wall disappears under the Roman masonry the stones were laid with the margin to the left.

The stones in the upper courses had a heavy rough boss with a marginal dressing on all four edges, which varied from 4 to 8 cm. in width. On some stones it was as much as 11 and 15 cm. In a few cases this margin was on three sides; in the case of a stretcher in the third course, on two sides only. In the second course, wherever this course was preserved, the margin was always on the right edge, away from the corner. On the corner stone itself the boss ran around on to the end, which then had the margin on its left side, i.e., away from the corner. In the third course the same rule held good. That is, where the margin was not lacking it was always on the side away from the corner, until we reach the small inserted block 12.2 m. from the corner, already spoken of. Beyond this the reverse

was true. The fitting was done only on the outer edge and never extended more than 1 to 2 cm. in. The sides of the blocks were left rough and any spaces between them filled in with chips and smaller stones. The dressing was done with a broad adze. The comb picking so common in the later periods was entirely absent in the Israelite masonry (Pl. 27 b). At two places on this part of the wall red lines (RM) were drawn on the dressed margin as a guide to the mason in dressing off the adjacent face. Both of these were vertical, but, as we shall see later, on other portions of the Ahab masonry horizontal lines have been found. Along the bottom of this and the other Israelite walls there was always found a mass of chips and stone debris. The inner wall of the enclosing wall with the cross walls tying it to the main outer wall was from 1 to 1.1 m. thick, and, therefore, was constructed throughout of blocks of that length (Fig. 27 and Pls. 25 a, b and 26 b, c). In room 313 this wall remained to a height of 2.6 m., and in 305 to a height of 3.25 m. Every course was laid with the blocks as headers, the only bond being obtained by breaking joints of each course.



27. Masonry in cross walls (E 14).  
Scale, 1 : 100.

Smaller stones were used in the interstices, and sometimes thinner headers were laid on their sides to equalize the differences between the heights of adjoining blocks. The cross walls were bonded into the inner wall in alternate courses. The masonry was devoid of dressing. The blocks were laid as they came from the quarry, and their ends projected irregularly from the line of the wall. This wall was purely a foundation wall, buried in the filling-in between the walls on one side and the filling-in for the court level on the other. They were therefore firmly held in place without additional bonding or fitting. This inner wall was traced up to the old Omri scarp at the southwest corner of that palace.

*Methods* — With these data before us we can form a very accurate idea as to the actual methods used in constructing the wall. In the first place the stones were brought to the work just as they were split off in the quarry, of a roughly rectangular shape, and all fitting was done as they were being built into the wall. The position of the corners having been fixed and the line of the wall marked out, a trench the width of the proposed wall was cut to receive the lowest course, or, as in this case, to receive the outer row of stones only. As this course was usually, therefore, below the surface, it was laid more easily with narrow headers throughout. The work progressed from both corners of the wall towards the middle. At the southwest corner the short lowest course between the corner and the first rock offset was laid from the corner and from the face of the rock offset, as it was easier to fit the final stone in between two others than against the uneven face of the rock.<sup>1</sup>

When the first stone had been placed in position, a narrow margin on the face towards the next stone was dressed off, and a red line drawn on it vertically

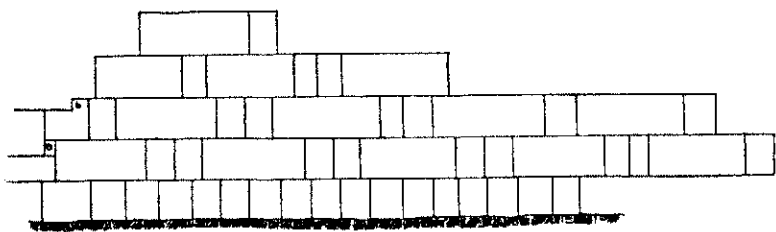
<sup>1</sup>The practice of building from both ends of a wall towards the middle existed from very early times in Babylonia, and is more or less true of other countries, as it is the easiest and

most natural way to build a wall after the corners are once fixed. It obtains even in our own day to a large extent, especially in the construction of brick walls.

as a guide in cutting the edge. The red line marked the actual cut, and would thus disappear in the cutting. The few lines which were left were 1 to 2 cm. inside the edge, and were evidently errors of the mason, who found that the stone could be cut larger than he at first supposed. The side of the block was then chipped away; carefully at the red mark and more roughly inside it. One edge of the next stone was then fitted against it, and so on throughout the length of the wall, the margin always being cut on the side to which the next stone was to be fitted. The bottoms of the stones were fitted roughly to the face of the rock below, and the tops were left rough until the entire course was completed. They were then dressed off to a uniform level surface for the reception of the next course. In the lowest course apparently no line was drawn as a guide for this top dressing.

The second and following courses were laid with headers and stretchers in varying order, as, S-HH-S-HH, etc., or HH-S-HHH-S-HH-S, etc. They were built in the same way as the first course, that is, beginning at the ends of the wall and working towards the middle. As more careful fitting was necessary above the rock, both sides of the stones were dressed, that is, one edge to fit against the last stone and the other to receive the next one. Even here, however, as I have shown, many stones were dressed on one side only, but in that case always on the side towards the stone next to be laid. In these courses after all stones were in place an additional margin was cut along the top edge, so that a red line<sup>1</sup> could be drawn as a guide for a perfectly true horizontal cut. Where the masonry met in the middle, a wedge-shaped piece the width of the gap was inserted. (See Pl. 26 b +.) The rough bosses were left on the surface until the whole wall was completed. Then the entire surface was dressed off where it was to appear above ground. Below, it was left in its original condition. Thus these bosses were not ornamental features of the masonry, but purely a natural result of the method of construction. This continued to be true of the masonry of Samaria down into the Roman period.

In H 16 was another portion of the southern façade forming the exterior of the south wing. In the best preserved part of it five courses were *in situ* (Fig.



28. Masonry in outer face of south wing (GH 16). Scale, 1 : 100.

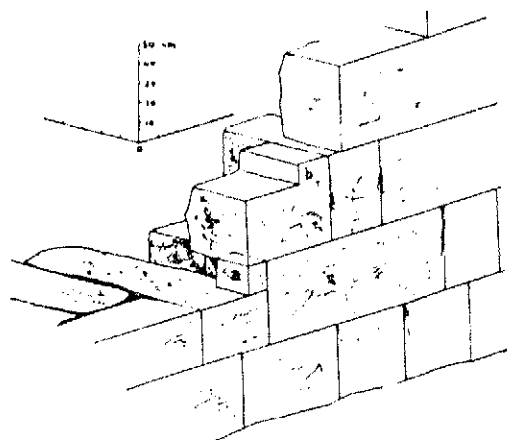
28). The method of building was the same as at the southwest corner, a course of headers being first sunk in the rock, with regular courses of headers and stretchers above it. These courses were uniform in the greater length of the wall, but

were not so high as those at the southwest corner. The bottom course was 41 cm., and the others were, successively, 43, 42, 43, and 44 cm. high. Near the southwest corner of the wing the lower course continued through, but the next three courses changed to 27, 78, and 53 cm. Where two courses of different heights came

<sup>1</sup>These red lines were probably made, as in Egypt, by snapping a taut cord smeared with red color. When drawing vertical lines, the cord was set to the perpendicular by

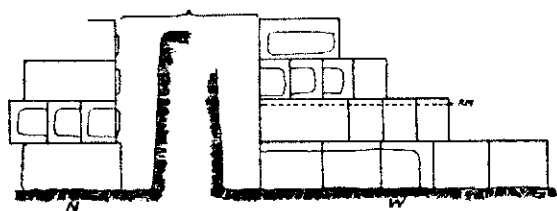
means of a plummet; when drawing horizontal lines, by means of a square and a plummet.

together, either a small compensating block (a, Fig. 29) was inserted, or the last stone of the course rabbeted out (b, Fig. 29) to equalize the difference. These devices were employed, of course, only on the exterior of the wall, the rough blocks of the interior being allowed to fit as they might, smaller stones and chips filling up the crevices between them. The wall was built against a scarp which was very irregular in height, and this irregularity in coursing may be due either to the impossibility of keeping the courses uniform when building from opposite ends over uneven ground, or to the fact that the courses at the west end, since they did not correspond to those running from the east of the wing, were carried around from the main façade.



29. Detail of bonding. Ahab, south wing.

The northern part of the great square tower in EF 15 was sunk in the rock for a depth of 2 m. The slope of the surface was such that at the northern side



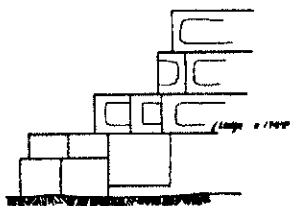
30. Masonry at NW corner of Ahab tower (E 15). Scale, 1:100.

no great rock cutting was necessary. At the northwest corner four courses were still *in situ*. (See Fig. 30 and Pl. 9 b, in which the two sides of the corner are given.) The masonry was built 56 cm. inside the face of the cutting on the west side, 50 cm. inside on the north, and 1.5 m. on the east. On the west face the lowest course was of headers, 62 cm. high, the

first two of which had no vertical margins at all, but the rest had the regular margin at the right side. All had an additional margin 11 cm. deep cut along the top edge. The first header appeared as a stretcher on the north face, and was dressed all over. This course also projected 6 cm. beyond the courses above, but only on the west face. The second course, 54 cm. high, was laid with a stretcher at the corner and then three headers; the rest of the course was missing. These were dressed on the right edge and along the top for a depth of 14 cm. On this was drawn a horizontal red mark 8 cm. below the actual cut. On the north face three headers were *in situ*, the first being the end of the stretcher of the west face. All had margins on the left side. The third course, 52 cm. high, began with four headers on the west face, with the margins on the right. Only the corner stone of the fourth course remained. It was 52 cm. high and laid as a stretcher on the west face, and had a marginal dressing on all four edges, varying from 6 cm. at the bottom and at the right, to 11 at the left, and 16 along the top. The whole of the course along the north face was laid as headers. The southern face of the tower was represented by two courses of stone in F 16. The lower of these was composed of headers partly sunk in the rock, 3.86 m. below the level at the southwest corner of the main wall. The second course was also of headers, although only a few were in place, breaking joints with those below (Pl. 14 c 2).



The east face of the tower at the northeast corner was 1.5 m. inside the face of the rock trench. There were four courses of the wall *in situ*, but these extended only a few metres from the corner (Fig. 31 and Pl. 9 c 2). The



31. Masonry in east face of Ahab tower (G 15). Scale, 1:100.

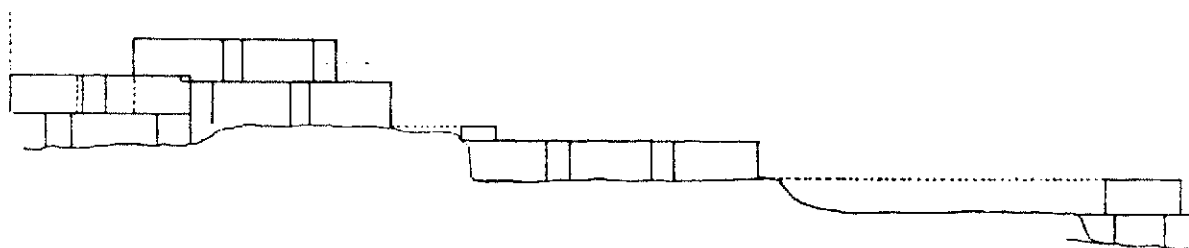
lowest course consisted of large headers resting on the surface of the rock at the bottom of the trench. It was 64 cm. high. At the southern end, where the wall was destroyed, this course contained two rows of stones. Owing to the slope of the surface, the number of courses increased towards the south, and it was the intention to fit the courses into one another with offsets, as was done in the face of the south wing. This course, like the one on the west, projected from the courses above, but here the projection was 19 cm. The other courses were respectively 51, 53, and 53 cm. high. In the second course the blocks had margins on both top and bottom, as well as on the left edge. In the third course one stone had a margin on the right end fitting against a smaller one on the adjoining stone, but the other end of the former stone was broken off. It probably had a margin on all four sides, as had the stone in the fourth course.

In LM 14-15 were fragments of massive masonry built into recesses cut in the bottom of the Omri scarp. Four of these were found, but more may exist to the east. In two of them the masonry was *in situ*. The walls were 2.05 m. thick and 3.5 m. apart. The blocks were laid alternately as headers and stretchers, breaking joints with those in the next courses, but not otherwise fitted or dressed. They were foundation walls merely, and until the rest of the building in this direction is cleared cannot be explained. No other portions of masonry of the southern façade have been uncovered. Along the western side, resting on the rock-scarp from the corner northwards, were groups of two or more blocks belonging to the lowest header course. The positions of these are indicated on the plan of the Israelite period (Plan 5), and the several fragments along the western façade are shown in Pls. 29 d 2; 32 b 2; 39 a, b 2; 40 d, e 2; and 41 a 2. Only at one point (C 11-12) were the lower courses of the inner wall *in situ*. Very little of the northern wall has been traced (Pls. 20 d and 21 a, c). In D 5-6, between the parallel walls of the long Roman subterranean corridor, were preserved short lengths of the outer and the inner walls with one of the connecting cross walls belonging to the northern side of the west wing.

The outer wall was 1.2 m. high, and constructed like the southern wall; but the inner cross walls, which were 1.15 m. high, were not made of single blocks laid as headers, but of headers and stretchers mixed with smaller squared stones, the whole, however, being well bonded together. In E 4 was the lowest course of the northern wing, the outer row being sunk in the rock as headers, and the gaps between the irregular rock and their ends filled in with smaller stones. Inside this, in E 4-5, was the interior angle of the wall. It was built of single blocks laid as headers. The cross walls were bonded in the alternate courses, only three of which were in position at the highest point.



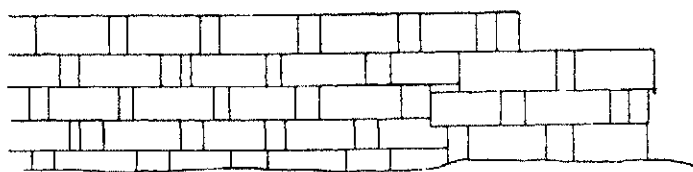
We now reach the masonry on the interior of the Ahab palace. The east wall of the great court was traced from within 5 m. of the inner south wall (the Greek Fort Wall having destroyed the connection between the two) to the small Roman vault which interrupted the continuation of the wall to the north. The surface of the rock on which the wall was built sloped unevenly up towards the north, and its top had been leveled off in a series of low steps or terraces, as in the southern façade. This leveling, however, rarely extended the full thickness of the wall, but was only for the outer row of stones, the rest of the rock being cut to receive the upper courses (Pls. 33 f and 34 d). Outside the wall, part of the rock had been cut away in a low scarp, but at intervals spurs of rock had been left projecting from beneath the line of the wall. As all this was below the level of the court, the quarrying was done mainly for the stone. At the south end of the wall only a few isolated pieces of the masonry remained *in situ* (Pl. 34 d 2). The use of headers only (p. 98), for the lowest course, did not obtain in this wall. Just north of the Greek Fort Wall were two stones, a header and a stretcher, built into the rock face (Fig. 32). In F 13-14 two courses were left, consisting of three headers on



32. Masonry in west face of main building, south end. Scale, 1:100.

the rock with a stretcher above them. The lower course was 30 cm. high, its top being level with the offset in the rock against which it was built. The second course was 46 cm. high. Further north were three stretchers with two headers between them, one of which had been removed. This course was 49 cm. high, and was built against another rise in the rock, another course 23 cm. high being necessary to bring the level of the masonry even with the latter. Beyond was a large fragment of wall with three courses *in situ*, all built of alternate headers and stretchers, 50 to 55 cm. in height. A small block was used to equalize a change of 5 cm. in the level in the coursing. There were also two vertical red marks on the stones of the second course. Above the level of the court the surface of the stone was dressed all over. Below, the rough bosses were left, but many stones even here were wholly or partly dressed.

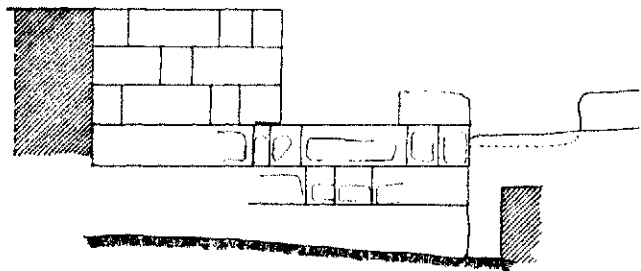
In F 10-11 the Ahab wall was covered by a large building of the Babylonian period and by several Herodian foundation walls, which were not removed during the progress of the excavations. Between the latter and the wall of the vault the wall remained *in situ* to a height of over two metres (Pl. 38 a, b 2). The lowest course was partly sunk in the rock, and both this and the upper courses were composed of alternate stretchers and single headers



33. West face of main building, north end. Scale, 1:100.

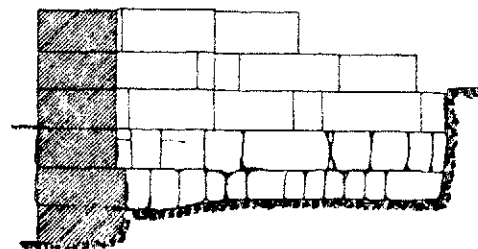
(Fig. 33). They varied in height from 38 to 51 cm., and, as they did not run uniformly along the wall, the usual small blocks were used to level up the differences between the various courses.

The only examples of superstructure masonry were found in two rooms (11 and 12) built into the offset in the Omri scarp (H 11). The interior walls were

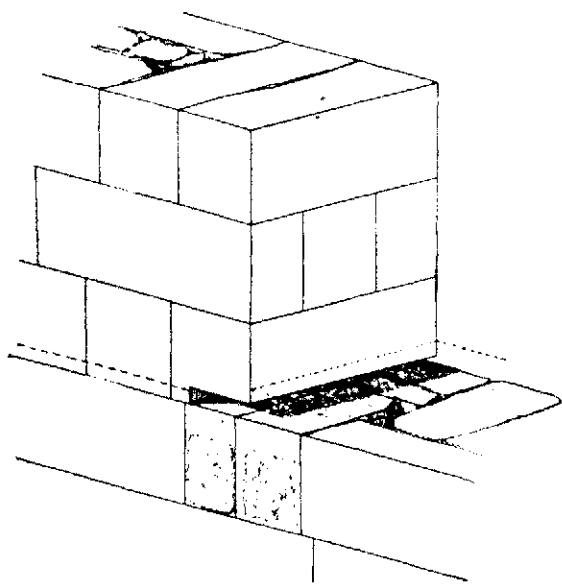


34. Exterior of west wall of room 11. Scale, 1:100.

1 m. thick, and on the exterior were laid with alternate headers and stretchers, carefully fitted on the faces, but tapering in the core of the wall, the interstices being, as usual, filled with small fragments of stone. On the exterior west wall of room 11 the courses below the level of the floor were, respectively, 50, 48, 52 cm., and those above the floor 49, 50, and 48 cm. (Fig. 34). In the foundation the stones had slight bosses in the two lowest courses, with margins on the left and along the top edges. The third course had margins on all four edges. Above the floor-level the faces were finished uniformly with fine short strokes of a chisel (see Pl. 8 a, c). In the interior of room 11 the north wall was built on two courses of rougher masonry, projecting beyond the superstructure. The bottom course was of various-sized blocks not carefully laid. The next course was of large headers and stretchers laid with wide joints filled in with small stones. (Photograph on Pl. 8 a and elevation in Fig. 35.) Along the top this course had a dressed margin, so that a better joint for the finer masonry could be obtained. These courses were carefully fitted and finished. The jamb of the door in the east wall



35. North wall of room 11. Scale, 1:100.

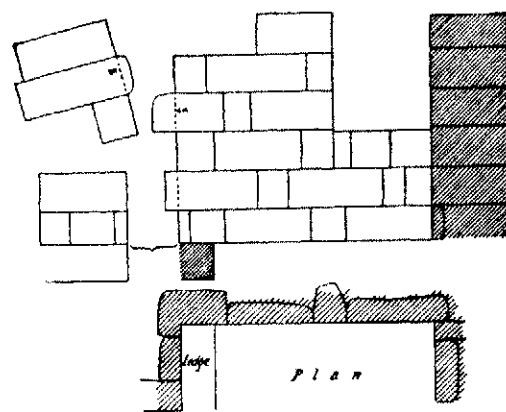


36. Isometric diagram of north jamb of door to room 11. Scale, 1:40.

had a rebate 7.5 cm. high, cut 33 cm. into the stone (Fig. 36). This extended the whole width of the jamb, and was intended to receive the sill, a thin slab of finer stone. Owing to this deep undercutting, the masonry had settled so that the upper courses on the interior of the room were slightly displaced. (See Pl. 8 a, b, c.)

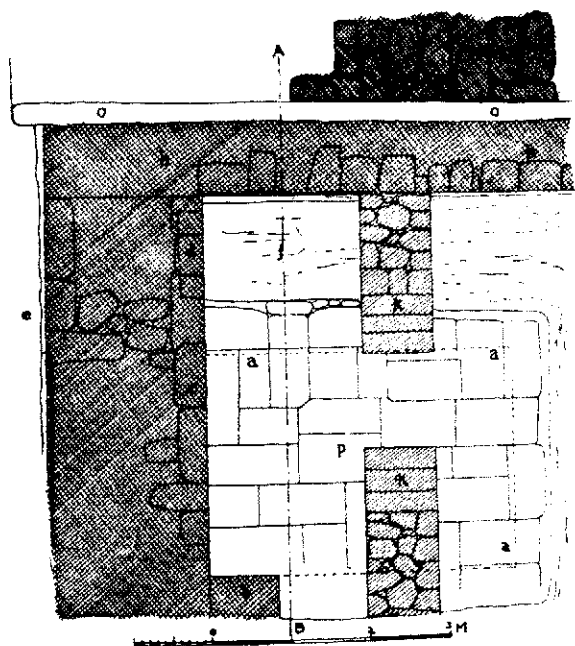
The doorway leading to room 12 was filled in with masonry closely corresponding in coursing and finish to the masonry in the rest of the wall. In the adjoining room 12 only the south and a part of the east wall were *in situ* (Fig. 37). On the south side were six courses, all perfectly fitted and uniformly dressed, even the courses below the sill of the door to room 11. From the bottom up they were 43, 49, 50, 50, 48, and 54 cm. high, and quite regular along this face, extending also around the east

side. The sill of the door had originally been one course lower on this side than on the side towards room 11, due no doubt to a step in it, but a course of dressed masonry, not quite corresponding to the coursing of the rest of the wall, had been fitted into it. Of the west wall only two courses were actually *in situ*. The third course was entirely missing, and the fourth, fifth, and sixth courses had settled out of their positions, owing to its removal. Under this wall there was another rough course of masonry projecting 4 cm. beyond the face, but there were no evidences of such a course on the south face. The corner stone of the lowest course above this was of L shape (see plan in Fig. 37), so as to bond into both walls. The upper courses were bonded into each face alternately, and a red line (RM) had been drawn as a guide to mark the exact corner.

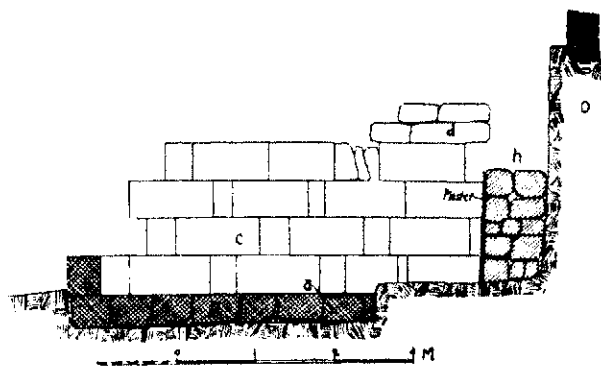


37. South face of room 12. Scale, 1:100.

The masonry of room 13 is given in Figs. 38 and 39. The pavement, p, covered an area of 4 m. by over 4.5 m., and was laid in a trench in the rock, which



38. Room 13. Plan.

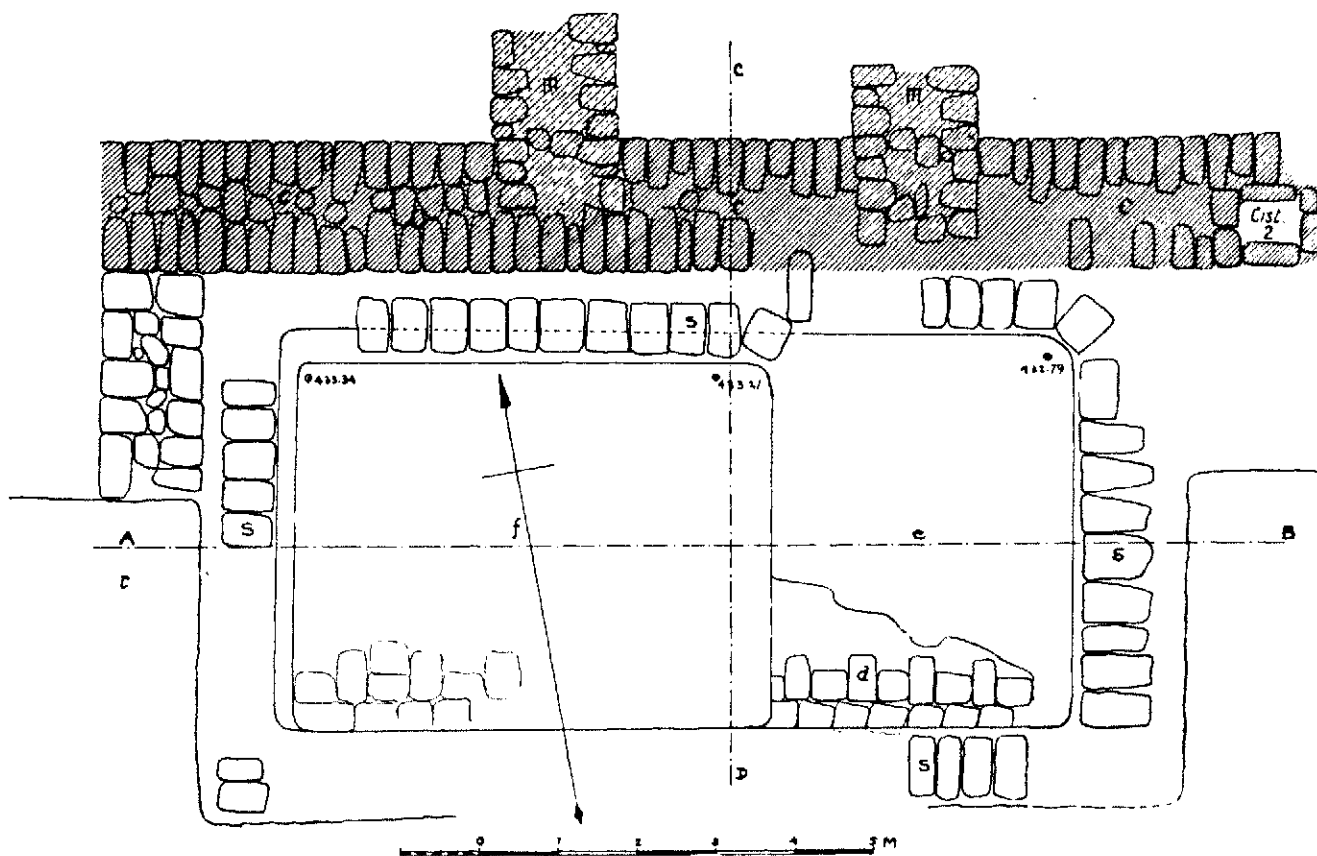


39. Room 13. Section A-B.

was 90 cm. deep along the south side and 1.7 m. along the north. The slabs were for the most part rectangular, averaging about 55 by 100 cm., but along the east side they were more irregular, and fitted at the corners as shown. The walls of the room were laid around the edge of this pavement, and concealed the rock faces. On the north side was a wall, c, which in part belonged to this room (Pl. 8 b 2). It was laid with the regular headers and stretchers carefully fitted and dressed like those in rooms 11 and 12. At the west end of this north wall was a single block, b, bonded into it and forming the northwest corner of the room. The east and south sides could be clearly traced by the mark of the masonry upon the pavement at a, a (see p. 94). The east end and the upper courses, d, were rebuilt at a later time, probably during the early Post-Israelite occupation, to

which the walls k k belonged (Pl. 8 c 5, 7). Fig. 39 is a section through the pavement and the earlier and the later walls near it. At o is the original Omri scarp with the position of the exterior wall built on it inside a rim. At h is the later Ahab facing wall built against it. The elevation of the north wall is c; the fragment of west wall, b; and the reconstruction, d.

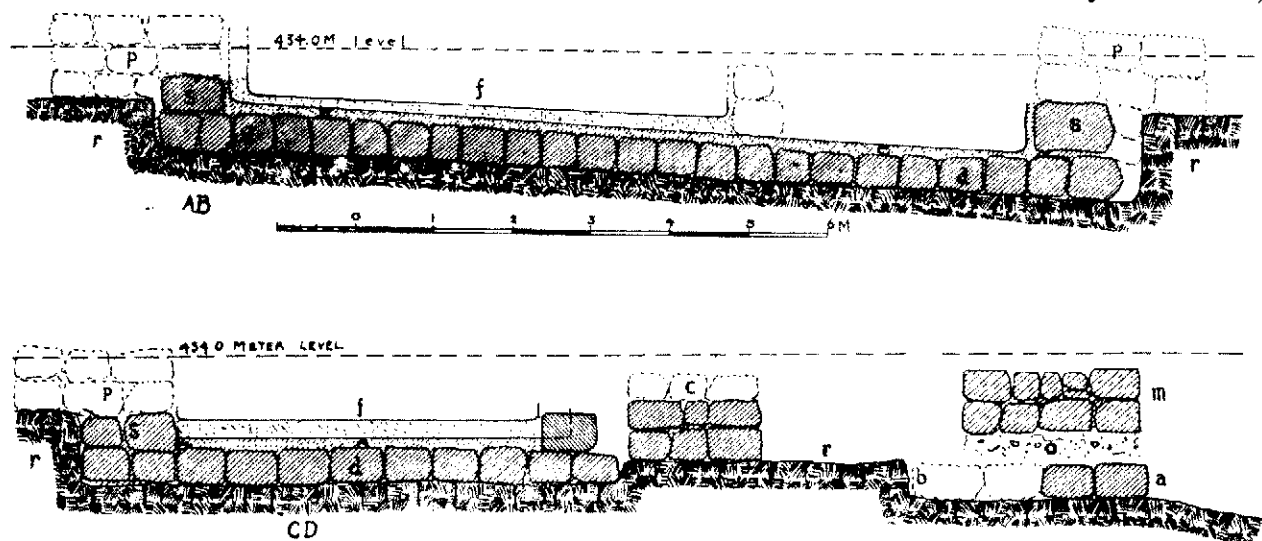
*The Pool* — In FH 5 were the remains of Israelite walls forming part of the northern limits of the palace (Figs. 40 and 41). There were two parallel walls, with channels cut in the sloping surface of the rock. The northern face, a, of the outer projected from the debris under a later heavy wall, m, built obliquely across it. The inner edge, b, of the rock trench parallel to the masonry was 3 m. inside this outer face, and must have marked the inner line of the wall. A space 1.9 m. wide divided it from a parallel wall, c, 1.7 m. thick, which was traced for 20 m., and for that length had two courses yet *in situ*. The masonry was neither fitted nor dressed, and was laid with uneven headers in the lower course and also in the second course, but mixed with smaller and shorter stones (Pls. 20 d and 21 a).



40. Plan of pool. Scale, 1:100.

Inside this wall was the large reservoir for water, the so-called "Pool of Samaria." Originally this was 5.2 m. wide and 10.23 m. long, with its long axis parallel to the north wall. The rock was first cut away, forming a basin ca. 90 cm. deep, and 1.2 m. to 1.4 m. larger all around than the final pool. This basin had a slope from the west side down to the northeast corner, where it was 54 cm. lower. In it a flooring of heavy slabs, d, was laid. The lowest course of the side walls, s s, was laid against the side of the rock cutting, r r. These walls were nowhere preserved above the rock surface, but must have been of considerable thickness, resting on the rock as shown by the dotted lines p p. They

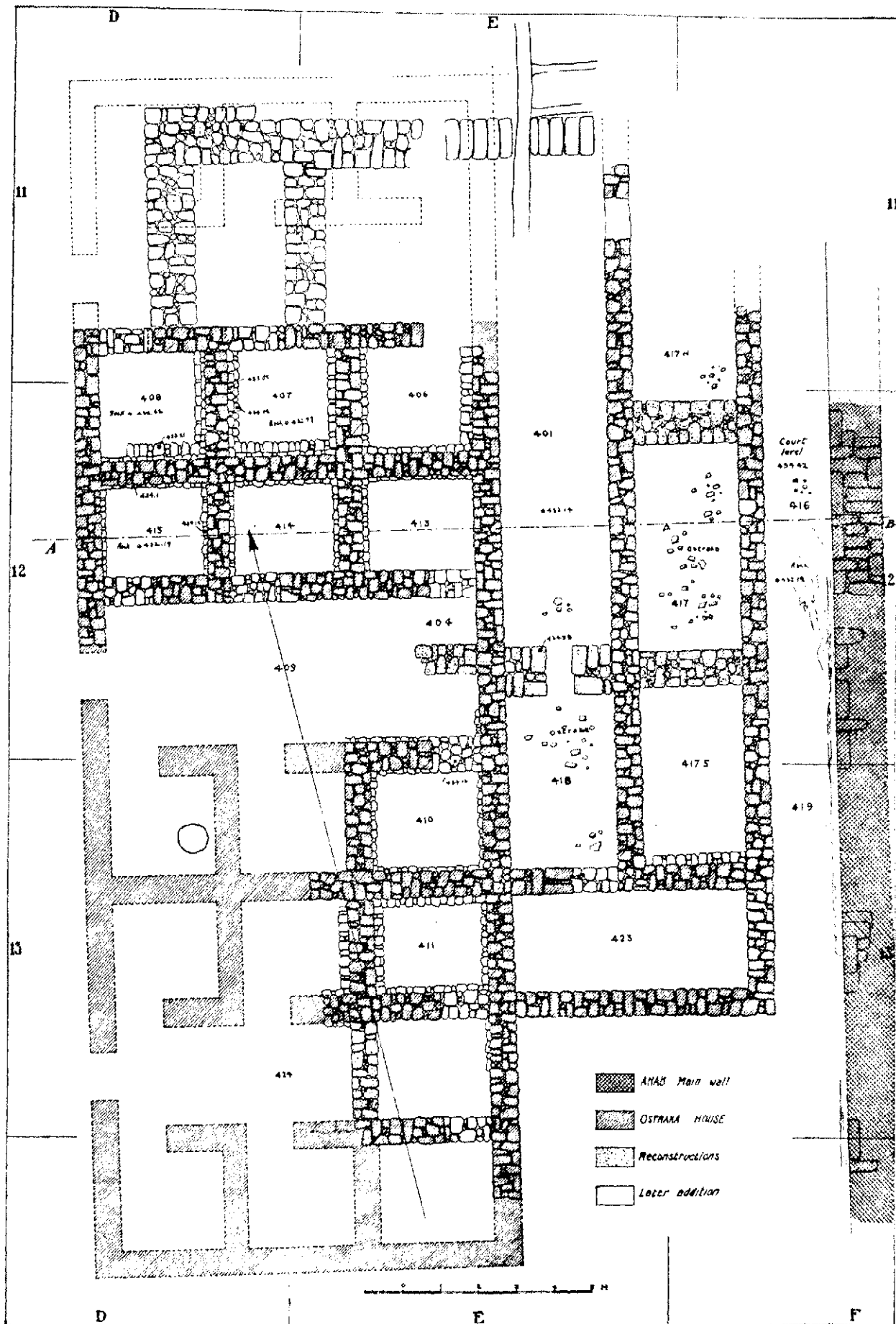
were laid with blocks averaging 50 cm. wide and 70 cm. long, not fitted together, but laid in cement. The corners were formed by blocks placed diagonally but not cut to fit. Over the bottom and sides of the pool was spread a layer of grayish cement, e, ca. 10 cm. thick. This was mixed with wood ashes and was of a hardness equal to the masonry itself. The bottom of the pool was over 5 m. below the level of the Omri palace and 70 cm. below that of the Ahab court on the west. There is no indication of the level of the palace on this side, but, to judge from the depth of the pool, it must have been above that of the Ahab court. During a subsequent period in the occupation of the palace the pool was rebuilt on a smaller scale (Fig. 41). It was reduced to 4.75 m. by 6.05 m., and



41. Sections A-B and C-D through pool. Scale, 1:100.

the bottom was raised 10 to 20 cm. above the first level by another layer of cement, f. The bottom, while still sloping to the east, had a difference of only 20 cm. between its two ends. The sides were built in the same way, the stones apparently being taken from the old wall and moved in to the new one.

*Drainage* — The drainage of the palace during the Ahab period appears to have been towards the north. Below the floor-levels of the Ostraca house, room 401, was found the beginning of a small channel with a series of smaller gutters opening into it from the east (Pl. 35 b 2). This was traced to the south side of the Roman vault. Inside of this was a deep rock basin (?) of irregular shape, although on the east the side had been cut away in the form of a door with jambs. The bottom of this was considerably below the bottom of the canal. Just outside the north wall of the vault was another rock canal, but while in line with the channel to the south, and with the east side of the deep cutting under the vault, its bottom was above that of the latter. From the vault northwards the canal was from 1.5 m. to 1.8 m. deep and 45 cm. wide, with a covering of large thick slabs of stone (Pl. 24 a 2). It sloped gently downwards towards the north, and just before reaching the outer wall made a sharp turn to the west inside the latter. Beyond this it could not be followed, so that its ultimate outlet was not found. At several other points, especially inside the west wall, were short channels cut in the rock, but nothing could be made of them as canals, because they seemed to end abruptly. It seemed more probable that they were the bottoms of grooves left after quarrying.



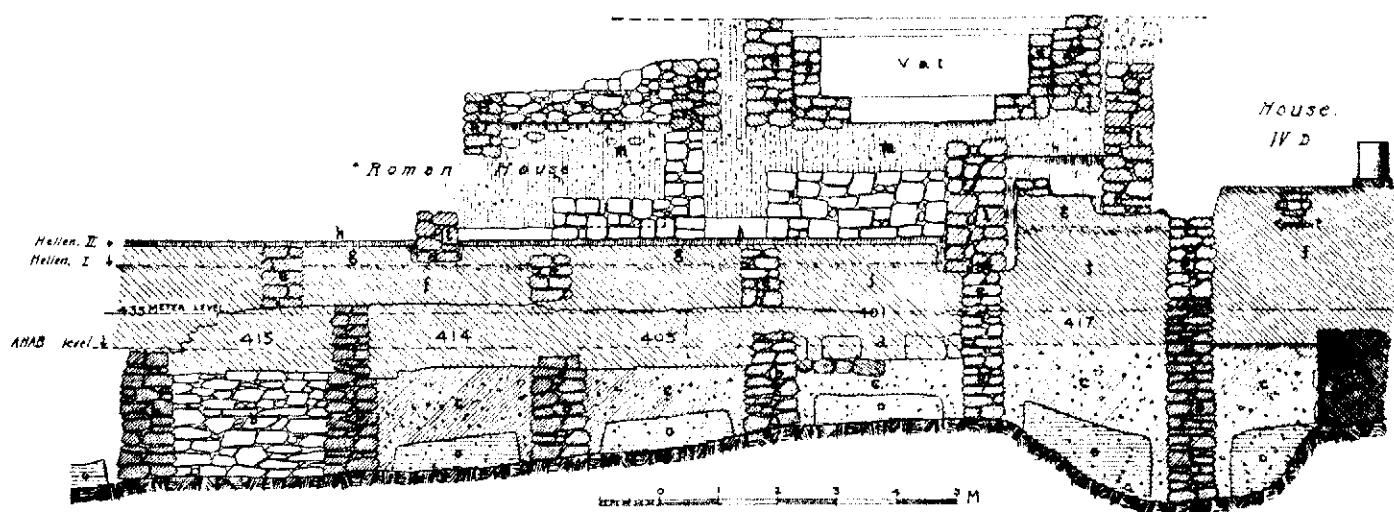
42. Plan of the Ostraca House, with later reconstructions.

## c. THE OSTRACA HOUSE (DF 11-13)

The Ostraca House occupied, as has been said, the southern end of the great west court of the palace of Ahab (Pls. 34 c and 36 a). It faced towards the west and was separated from the wall of the court on this side by a space varying in width from 6.8 m. at the southern end to 7.4 m. at the northern end. The cause

of this variation is that the storehouse was not laid out exactly parallel to the walls of the court, but had its axis more nearly north and south than that of the latter. On the south end the building was 3.65 m. to 4 m. from the main wall, and along the east only 1.8 m. In plan it was rectangular, 11.3 m. wide and probably 31.8 m. long, as it seems quite evident that the large corridor 409 (Fig. 42) was in the centre of the building. The interior was divided into three groups of six rooms each. The rooms of each group were arranged by threes on either side of a corridor extending across the building and opening on the space inside the west wall. Of the central group the corridor 409 was *in situ*, with the rooms 413, 414, and 415 along its north side, and 410 on its south side, the other two rooms being destroyed. Of the south group only the east end of its corridor, 424, with room 411 was *in situ*. The foundation wall, however, continued at a low level towards the south to the point where it was cut through by the south Greek Fort Wall, which destroyed all of this end of the building. On the north there were three rooms, 406, 407, and 408. In 406 there was still part of the jamb of a door, which must have opened on to a corridor similar to the others. There was most likely another row of rooms opposite to these to make the plan complete.

All the rooms were practically square, and the apparent variations in their dimensions were largely due to the fact that for the most part the measurements had to be taken over the rough foundation walls. The extreme dimensions, however, were only 2.5 m. and 3 m. It was evident, however, that the rooms of the east end of the rows were uniformly slightly wider than those in the other rows.



43. Section A-B through Ostraca House and superimposed strata.

- |   |                                    |
|---|------------------------------------|
| a. West wall of main Ahab building.         | g. Second Greek period.            |
| bb. Foundations of Ostraca House.           | h. Herodian Atrium House.          |
| c. Filling in below floor of Ostraca House. | ll. Street walls, Herodian period. |
| o. Yellow debris above rock.                | m. Debris of the same.             |
| d. Later wall.                              | n. Severan walls.                  |
| ee. Walls of first Greek period.            | s. Severan walls, additions.       |
| f. Construction debris of Greek period.     |                                    |

The superstructure was preserved only in the north wall of 406, where there was the jamb of the door leading to a corridor, which had been destroyed by the later Osorkon House, and in the south walls of rooms 410, 413, and 414. At the eastern end of corridor 409 was found a group of characteristic Israelite bowls,



buried in the debris above the original floor of the house, but below a later wall of Hellenistic date (Pl. 33 d). In the wing on the east, the west side of the door between rooms 419 and 423 was preserved to a height of 40 cm. The doors were always in one corner of the room (Pl. 33 e), so that each door had actually but one jamb, the lintels being built into the main walls adjoining. No entrance was found leading from the passages or rooms of the main building into the wings, but the absence of these can be explained readily by the fact that at no point along the east side was the superstructure *in situ*. The wing was divided into two long parallel chambers, 401 and 417, extending north and south, with a cross chamber, 423, at the south end, the full width of the wing. From this a door led into room 418.

*Construction* — The house was built upon the same level as the great Ahab court (cf. Pl. 33 f, and Fig. 43), and its construction was started before the filling-in of the palace platform had begun. Construction trenches were sunk down to the rock surface, which lay from 2.5 m. to 4 m. below the court level, thus passing through the stratum of yellow chip debris (o, o, Fig. 43), which had accumulated during the cutting and dressing of the masonry for the walls of the main palace. These construction trenches were the first to penetrate this undisturbed stratum. They were dug 60 cm. to 80 cm. wider than the proposed foundation walls, and in them were laid the footings (b, b) of the building. The latter were usually 1.05 m. thick, but under the walls separating rooms 407, 408 from 414, 415 the lowest footings were 1.15 m. in thickness. These walls were not continued perpendicularly to the level of the superstructure, but had one or more slight offsets, varying from 10 cm. to 20 cm. in width and from 80 cm. to 1 m. in height, so that at the floor-level they were very little thicker than the superstructure walls. The masonry was of a totally different character from that of any of the preceding or following periods, and, so far as the excavations have been carried, was peculiar to this building. Broken stones of various sizes were used. These had not been used before, but were flattish fragments, with sharp, cleanly broken edges, just as they came from the quarries, and they were never fitted or dressed. In Fig. 43 b, in the section through room 415, the shading indicating the filling-in has been omitted, in order to show the wall structure at b. Mud mortar was used and small chips were fitted into the crevices in order to make a solid wall. The upper walls were from 65 cm. to 70 cm. thick, and of similar rough stones, except at the door jambs, which were made of larger stones cut square on the exposed edges. The rough surfaces of the walls had no doubt been plastered over with a thick layer of mud and straw, which was perhaps also mixed with ashes, as in the cisterns.

This building continued to be used for a considerable time, as appeared from the later walls built in some of the rooms. At the eastern end of the large corridor, 409, a wall had been built dividing the corridor longitudinally, and between 401 and 416 was another, apparently built in continuation of that in 409. This second wall was much thicker, and contained a doorway, not at one side, as



usual in the main Ostraca building, but at the middle. In room 417 there were two cross walls, one continuing the line of that between 401 and 416, and the second nearly opposite room 406 (Pl. 33 e). These divided the room into three parts, two of which were of nearly equal size. Across the east end of corridor 424 in the main building a new wall, built in line with the division walls on either side of it, cut off the end of the passage, forming perhaps an additional storeroom, through which the two older rooms adjacent had to be entered. All these walls could be easily distinguished from the original building, because in no case did they extend to rock, but rested on shallow foundations, without the offsets peculiar to the older walls, or on the house floor itself, and also because they did not bond into the other walls. The stones used were, as a rule, larger and more regular.

The northern end of the building, if it existed, as assumed, must have been torn down before the construction of the Osorkon House (see p. 131), which is so named from fragments of a large alabaster jar found therein bearing the cartouche of Osorkon II.

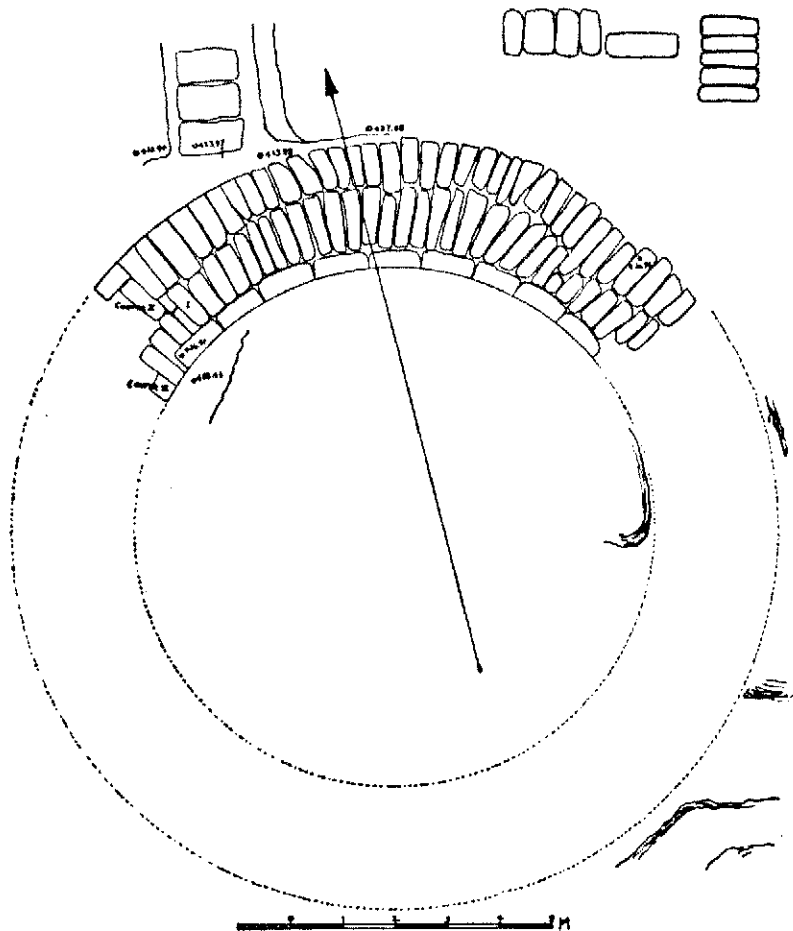
d. PALACE OF JEROBOAM II (?)

[ca. 782-741 B.C.]

During the reign of Jeroboam II additions were made to the western and northern wings of the palace, including a great circular defensive tower at the southwest corner. At the same time several minor alterations were made in the interior plan of the building. The western wing was extended ca. 17.5 m. farther to the west, the western façade being built exactly parallel to that of the preceding Ahab palace. With few exceptions the portions of the walls of this period still remaining consisted of only a single course of masonry, and, where all walls had disappeared, the place could be traced by a system of rock trenching for foundations, similar to that which obtained throughout the previous Israelite periods (Pl. 29 a-d).

From the walls which could be traced in this way it was evident that a uniform row of chambers was constructed along the outer wall, similar to those within the Ahab façades. The outer southern face of the new wing was set back 1.7 m. from the old Ahab face. The outer wall was 1.5 m. thick, and 2.6 m. inside of it was a parallel wall 1.15 m. thick. On the western side but little remained of the masonry, as the greater part of it had been removed for building the great Greek Fort Wall. The latter was built over a number of the rooms, which could have been explored only by destroying it. At a distance of 12.7 m. from the Ahab façade and parallel to it was a rock cut, 1.6 m. wide. This was the trench for the inner wall of the new enclosure. A small fragment of wall, consisting of several large blocks deeply sunk into the rock near the round tower, was evidently part of the outer wall, but it could not be followed because the remainder of it was buried beneath an enormous amount of debris along the western limits of the trench.

The great round tower was built at the new southwest corner (AB 14-15). From calculations based on the part remaining, which was equal to about one-

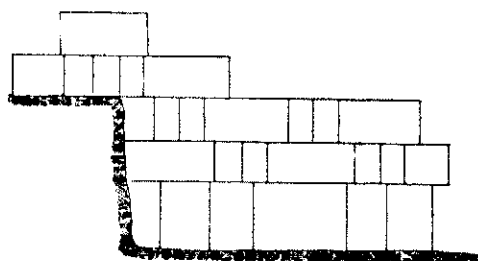


44. Plan of the tower of Jeroboam II. Scale, 1:150.

fourth of the circumference, the diameter of the tower was about 14.7 m. (Fig. 44 and Pl. 28 b). Its walls were 2.35 m. thick and were built upon the sloping surface of the rock, the inner part being sunk in a shallow trench to the depth of one course. The surface of the masonry inside the tower was dressed off, although several slight bosses remained. The outer face up to the point where the bastion of the Greek Fort had been built against it was likewise finished (Pls. 28 b 3 and 29 b 3). Inside this, however, the stones were rough, and in the original plan this part of the tower was concealed by the masonry of the main building. The blocks were laid as

shown in the plan, the wall being two headers and one stretcher in thickness (Pl. 30 c 3, d 3, e 3). The stretchers alternated in the successive courses between the inside and the outside face, whereby a perfect bond was obtained between the courses. The blocks were not laid radially, but slightly askew, a method which obtained, though to a less degree, throughout most of the straight walls of this period (Pl. 30 d 3).

The whole of the new palace area was filled with rooms divided by walls averaging 1.5 m. thick. No. 320 was originally 5.2 m. wide by ca. 11 m. long. It was divided lengthwise into two approximately equal parts by a wall 1 m. thick, of which the lowest row was laid with single headers. This probably supported a row of piers carrying the roof. Later a wall was built across the southern half of this hall, forming two rooms, 318 and 319. South of these were rooms 316 (3.7 m. by 7.7 m.) and 317 (3.7 m. by 2.2 m.). To the north were 321 (2.3 m. by 2.65 m.) and 329 (2.65 m. by 1.8 m.). Another room existed to the east of 321. Beyond these to the north the walls were broken by the long chambers inside the Fort Wall, but the south wall of room 322, which remained, was the best preserved of any. This was a facing wall 1 m. thick built against the older rock-scarp, and parts of five courses were *in situ* (Fig. 45, and Pl. 36 b 3).

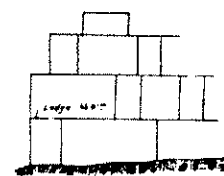


45. South wall of room 322.  
Scale, 1:100.

Inside the walls of the west bastion of the later Greek Fort Wall was one of the best examples of the masonry of this period, equal in all respects to any found in the Ahab buildings (Pl. 40 d 3, e 3). It consisted of twelve large blocks built against the scarp below the earlier west façade of Ahab's palace. The blocks were laid as headers, and were accurately fitted on the exterior face. There was also a short length of cross wall running out towards the west from this wall, representing the subdivision walls at this point. The remainder had been destroyed; and this occurred, no doubt, during the erection of the great bastion.

Farther north, and outside of the lines of the Greek Fort Wall, was another isolated fragment left by the later builders (in B 8). This consisted of three courses of several stones each, and a single stone of a fourth course (Fig. 46). In both these walls the system of bonding was much the same as in the Ahab period. The lowest course, however, was sometimes of greater height than the others, and laid with headers and stretchers combined. The upper courses were laid as S-HH-S-HH-S, or as S-HHH-S-HH, etc.

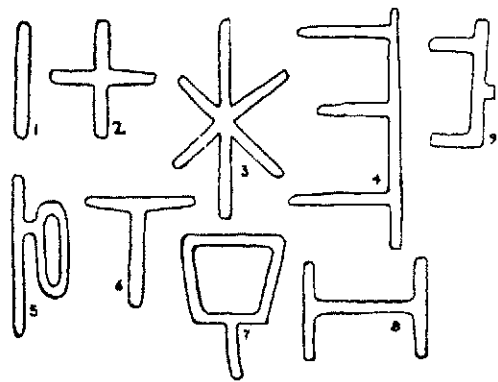
Of the northern wing of Jeroboam's palace the northwest corner only was uncovered (Pl. 21 b 3), and nearer the northwest corner bastion was found another fragment belonging apparently to this period.




46. Fragment of wall north of west bastion in B 8. Scale, 1:100.


#### e. MASONS' MARKS

On the surfaces of the stones, where exposed in the various walls, were found certain marks made by masons, ten in number. Some of these were Phœnician or Israelite characters, while others were apparently merely key marks. These are illustrated in Fig. 47.




47. Israelite masons' marks.


1. , 15 cm. long. From stone in north wall of Ahab room 13 in S2.

2. , 15 cm. From same wall as No. 1. (Cf. Schumacher, Tell el-Mutesellim, Pl. XXX e 4.)


Dr. Schumacher found another example of No. 2 at Sebaste in 1908.

3. Star, 28 cm. On stone in north wall of S3, 303 (Ahab palace, inside southwest corner).

4. , 30 cm. On older stone used again in later wall above northwest corner of S2-11. (Cf. Tell el-Mutesellim, Pl. XXX e 3.)

5. Possibly , ca. 20 cm. On stone in north wall of Ahab room 13 in S2.

6. —, 15 cm. On foundation stone in rock pit, north of S1-7. Omri court 7.

7. , 23 cm. by 18 cm. On stone lying in rock trench west of Roman altar, and probably belonging to the original Omri wall. (Found by Dr. Schumacher in 1908. Cf. also Tell el-Mutesellim, Pl. XXX e 2, 13.)

8.  $\gamma$ , 22 cm. by 20 cm. On stone in east end of Trench E, probably period of Jeroboam II. (Found by Dr. Schumacher in 1908. Cf. also Tell el-Mutesellim, Pl. XXX e 7.)

9.  $\delta$ , 11.5 cm. by 6.5 cm. On stone in wall east of preceding. Used again in Greek Fort Wall. (Found by Dr. Schumacher in 1908. Cf. also Tell el-Mutesellim, Pl. XXX e 14.)

## 2. THE OUTER WALLS OF THE ISRAELITE CITY

The walls forming the outer defenses of the Israelite city have been uncovered at only two points, at the great gate on the western side of the hill, and along the edge of the steep cliff south of the palace on the summit. While the exact dating of these could not be determined, it was quite clear from the gigantic scale on which they were planned and carried out that they belonged to the first two building periods, i.e., those of Omri and Ahab. The plan must have been established during the Omri period, and in the short piece of the southern wall which was excavated the size of the blocks and the system of construction point to the conclusion that this, at least, is from his time. Such masonry as was found at the gate was more characteristic of the Ahab period, but if it actually belonged to this period, it was doubtless merely a reconstruction of an earlier wall, and upon the original plan.

### a. THE WEST GATE

The plan of the gateway probably consisted of two large square towers defending a narrow entrance, but the site of only one of these towers has been definitely identified (Plan 10). A trench 18 m. long and ca. 15 m. wide had been cut in the sloping face of the rock (Pls. 44 b; 45 a). Along its outer edge the bottom of this trench was 2 m. below the rock surface, and at its inner over 5 m. (Plan 11, section A-B). In this trench was built the tower of solid, well-bonded masonry, as in the palace. Two courses of stone which appeared below the later Greek Fort Wall near the northeast corner of the tower belonged to this work, and another row of large stones projecting from beneath the square Greek tower built in the same rock trench probably belonged to it. To the north of the tower the rock surface was fairly level, towards the west it sloped down gradually, while on the southwest the descent was very rapid and irregular. There was no great rock trench on the south in line with that on the north, which seems to show that the south tower was not built on a line with the north one, but occupied a position on the higher levels of rock, towards the east. A short stretch of stones forming the bottom course of a wall, laid S-HHH-S-H-S-H, was found in I 3-4. To judge from the system of laying the stones, this wall certainly belonged to a restoration of the interior plan of the gate or to an addition made under Ahab. Between the two towers, therefore, must have been a spur of rock running towards the southwest, and this spur had been dressed off to form the original rock ramp to the entrance (Pl. 42 b 2.) The exposed surfaces of the ramp were finished with a facing of masonry, the west side of which, laid in a shallow rock trench

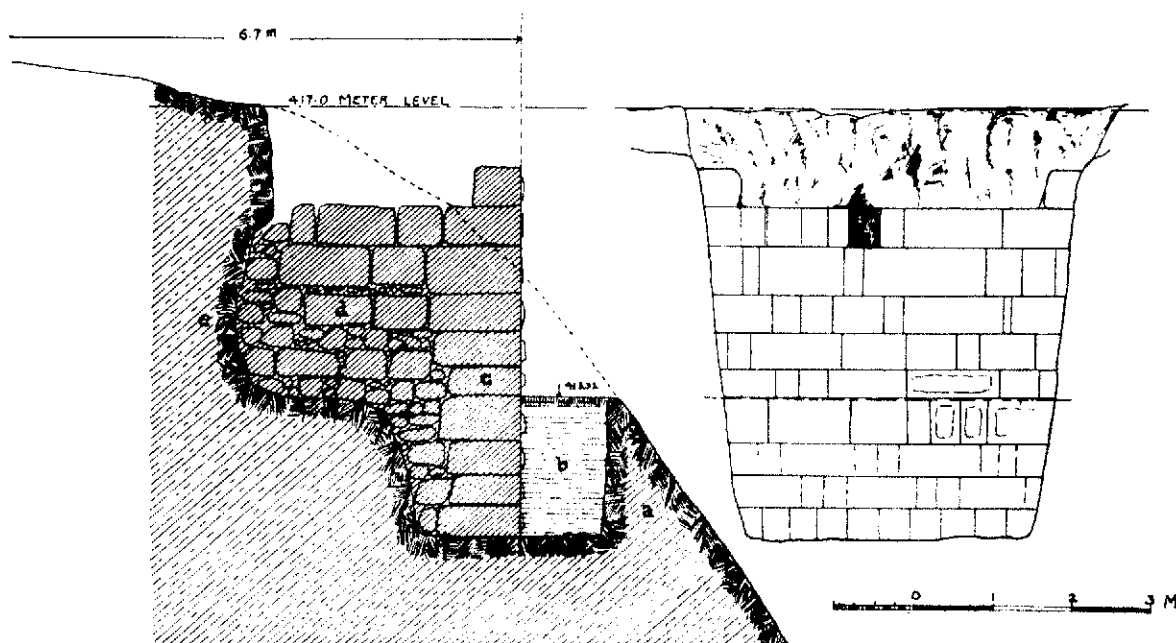
(HI 6), was still *in situ* to the length of 7.5 m. (Section E-F on Plan 11). This ramp did not have a straight sweep, on account of the slope of the hill, but had at least one turn. The course probably followed the edge of the slope south of the north tower, inclining upwards towards the latter, and, on reaching it, turning towards the east along its face.

From the north tower northwards, and perpendicular to its northern face, ran a shallow rock trench, which marked the position of the enclosing city wall on this side of the hill. None of the original masonry remained in it, but during both the Post-Israelite and the Greek period the city walls were built in this trench (Pl. 44 c 6, 7).

The actual connection of the southern wall of the city with the gate has not been found. But the great wall found at the top of the steep cliff south of the palace (L. T.) was part of the main city wall, and evidently followed the contour of the cliff to its western limit. It must then have turned towards the south tower of the western gate, thus placing the entrance to the city at its southwest corner.

#### b. THE SOUTH WALL OF THE ISRAELITE CITY

The steep cliff forming the southern side of the summit was the limit of the city in the Israelite period. The enclosing wall followed the edge of this cliff, descending towards the west to the place where the cliff became lost in the western terrace, and continued its course thence to the western gateway. The wall was built partly on the extreme edge of the cliff and partly on its slope, the rock being cut away as shown at a and e on the section (Fig. 48. Compare also Pl. 12 a, arrow). The outer portion was sunk in a rock trench 1.79 m. below



48. Section and elevation of south city wall. Scale, 1:100.

the surface. The bottom of this trench, where the wall was examined (J 20), was 411.53 m. above sea-level, or 24.53 m. below the floor of the room 11 of the Ahab palace, and 22.89 m. below the great west court. The trench was only 2.5 m. wide, and the face of the wall was set back 1.1 m. from its outer edge. The

space b was afterwards filled in with debris, which had a hard-beaten surface level with the outer edge of the trench. The courses were irregular, being 40, 40, 40, 59, 36, 47, 45, 62, 51, and 50 cm. high, counting from the bottom up (Pl. 13 d). The first four were below the surface of the debris filling b. The lowest course was laid entirely with headers, and the upper courses with stretchers and headers, usually laid S-HH-S-HH, or with single headers only between the stretchers, but this system did not obtain throughout (Fig. 48, elevation). Bosses were left on all the stones, but were not so prominent as those in the enclosing wall of the palace of Ahab, and the stones had dressed margins on all four edges. They were closely fitted on the face, but tapered in the usual manner towards the interior of the wall.

An examination of the core showed that the wall was not so carefully built as the palace walls, but this is easily explicable. Having excessive thickness, and being built in a deep trench or against the face of the solid rock, the wall had the requisite strength without the careful workmanship on the interior which would otherwise have been necessary.

The six lowest courses had only a single row of facing stones, c, and the space between their ends and the rock face was filled with rubble and chips. The seventh course, d, had three stones running into the wall well packed with chips, while the eighth and succeeding courses were built of solid masonry almost to the rock-face. At the short length of wall excavated at the edge of trench L. T. (J 20) there was a large pocket of rotten rock, e, and this had been cut away, and filled with rubble.

Along the width of the trench L. T., below the floors of the outer row of houses belonging to the Hellenistic period, were traces of the Israelite wall, but except that described no well-preserved portion of it has been opened.

## CHAPTER II

### EARLY POST-ISRAELITE PERIOD

The fortress—The Osorkon House—The west gate

The remains of this period consisted of the fortress on the summit and of a new city wall. The fortress was built upon the ruins of the Israelite palace, the walls of which it incorporated in part, and was enclosed by a massive wall. The city wall occupied much the same position as that of the preceding period.

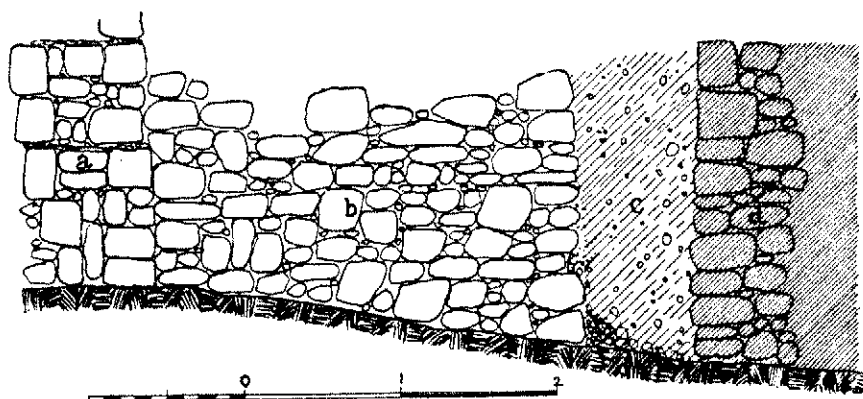
#### a. THE FORTRESS

*Plan* — The summit fortress has been excavated in part only. The arrangement, so far as it appeared from this partial clearing, is shown on Plan 6. The shape was irregular, and only the western side conformed to the orientation of the Israelite walls. The north side extended diagonally across the remains of the Ahab building. The west side, though parallel to the Ahab façade, was outside of it. The south wall extended obliquely across the Ahab walls. At all these points the later masons had torn down the Israelite walls in order to use the material again. Many of the larger blocks were kept for bonding in the new wall, but most of the older masonry was broken up into smaller stones.

The excavated portion of the fortress wall was nearly intact. At several points it seems to have been breached by siege operations and to have been repaired with rougher masonry. The height of the standing portions varied from 3 m. to 6 m. Even during the Herodian period little damage was done to the wall. The lower courses were left intact, and the upper portions were demolished only where they rose above the level of the Herodian floor, as in the case of the long subterranean corridor. The Herodian builders even utilized the great wall as the foundations of their new walls, where it coincided with their plan, and at the southwest corner they apparently adopted the lines of the old wall.

The north wall was traced for a distance of 50 m. from the point where it disappeared into the side of the excavations in H 3 to the corner tower in C 5. The highest part of the remaining wall here was in F 4, nearly opposite the Israelite pool, where it still had a height of 6 m. (Pl. 21 a 6). In C 5 it turns at a right angle towards the north for 6.3 m., turning again westward to form a bastion at the northwest corner of the fortress (Pl. 41 b 6). A part of this bastion had been destroyed by one of the Roman towers placed at intervals around

the temple enclosure. The wall was picked up again in B 5, running ca.  $14^\circ$  west of south. At the northern end of the Roman tower the original Greek Fort Wall had been broken and repaired for a distance of 2.7 m. from the face of the Roman works. This break probably extended even farther north (Fig. 49). The wall continued unbroken for 30 m., when it turned towards the west to form another bastion in the centre of the west side of

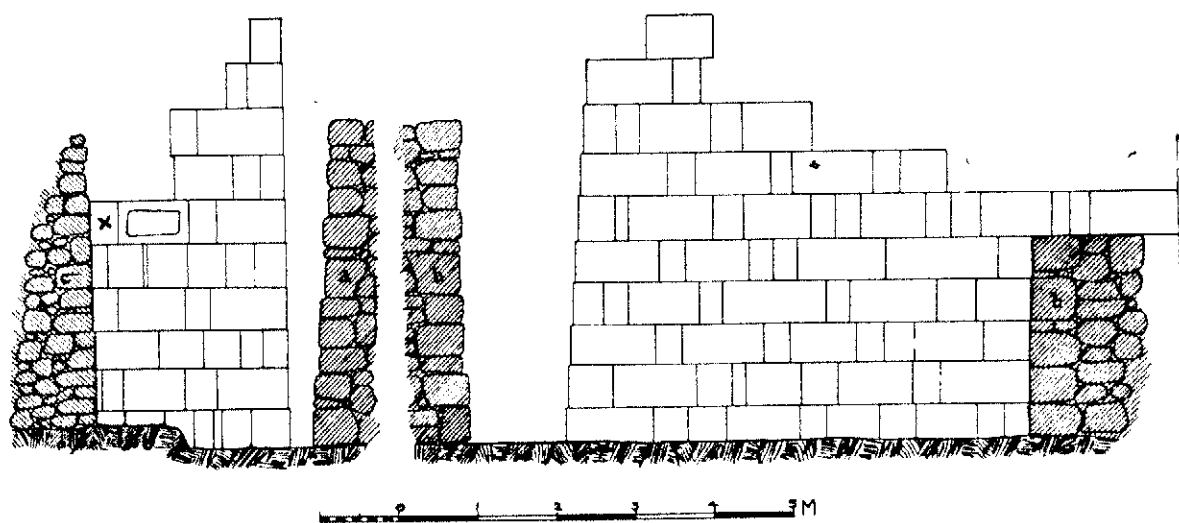


49. Greek Fort Wall, a, at NW corner, showing repaired breach, b, and wall cut through by construction trench, c, for Roman tower, d.

the fortress (B 8-9). This bastion had a width on its exterior of 14.5 m., and projected 7.25 m. on the north and 4 m. on the south side (Pl. 39 b, c 6). This difference was due to the fact that the wall to the south of the bastion did not continue in line with the northern part, but was farther

to the west and parallel to the main west Ahab façade.

At a later period another tower of smaller dimensions, 10.5 m. by 7 m., was built inside this bastion, breaking into its masonry on the south side. Along the eastern side of this new tower the lower courses corresponded exactly to those of the Greek Fort Wall, but at the northwest corner, where the north and west

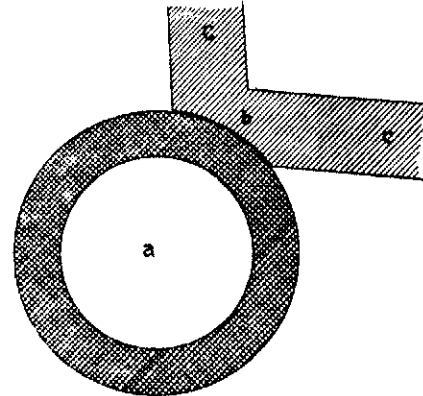


50. Masonry of second tower inside west bastion. a, b. Bastion. c. Foundation for Roman wall. X. North face of tower. +. West face of tower. Scale, 1:100.

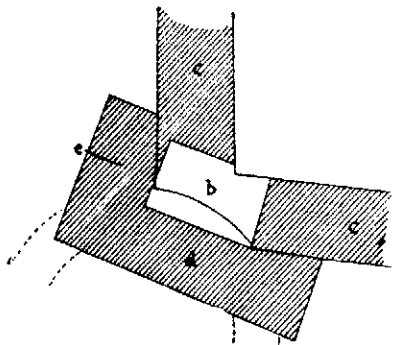
faces were preserved to a height of several metres (Fig. 50), the construction was different, more closely resembling that found in the square Greek tower at the west gate. Two of the stones bore masons' marks. The new tower was solid, at least in its lower portion. The interior was filled with rubble, into which were built drums and some of the best examples of Doric capitals found on the site. To some of these yellow stucco was still adhering. This tower was furthermore not rectangular, the southern side being longer than the northern; and thus the orientation was only approximately that of the irregularly shaped bastion.



To the south the wall continued 41.75 m. to the southwest corner. Originally the great round tower (a, Fig. 51) of the palace of Jeroboam II appears to have been utilized as the corner defence here, and the new Fort Wall, c c, was carried around its inner face as a mere screen, b. This represented the first Post-Israelite period. For some reason, however, this tower was afterwards destroyed down to the lowest course, and a bastion, d, similar to those on the west wall and northwest corner, constructed over it (Fig. 52). This bastion had to be fitted to the two long walls already constructed to the north and east of it, so that its shape was neither regular nor rectangular. (See Pls. 28 a, b; 29 a, b; 30 c, d, e.) From the lowest course of masonry on the west side it was evident that the builders made an error in laying out the new bastion, and started to build the west face only 4 m.



51. Wall of Greek Fort built around Israelite tower. First period.



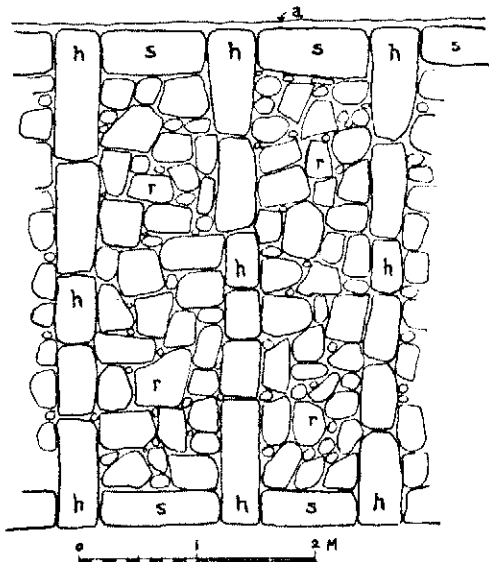
52. Corner bastion built over Israelite tower. Second period.

long (Fig. 52, e). Then, discovering that this would not make the corner sufficiently strong, they extended it to 7.75 m., making the final plan as shown in shading on Plan 6. This represented the second Post-Israelite period. Over this bastion also a Roman tower had been built, but as it utilized the older walls to a large extent for foundations, they were not destroyed. The south face of the bastion was orientated  $33^{\circ} 30'$  south of east, and the east face  $36^{\circ}$  east of north. On the west it projected 2.6 m. beyond the west wall, and on the south 4.4 m. beyond the south wall. The latter continued  $21^{\circ} 15'$  south of east for 34.8 m., and then turned out for 5.85 m. Here it formed another angle, and extended eastward 20 m. farther, with the same magnetic bearing as the rest of the south face (Pls. 11 b 6 and 15 e 6). At a distance of 19 m. from the last corner there was a small fragment of another bastion built on to the older face in the second period. The masonry was laid somewhat similarly to the old wall, and may represent another bastion added in the second period of the wall. Beyond this point no actual remains of the wall could be found, although in the side of the trench J 15, 7 m. beyond the last vestiges of the wall, a vertical stratum marked the point where the masonry had been removed and the hole filled in with earth, and showed clearly that the wall had continued towards the east (Pl. 16 b 6). In the excavations in L. T. E. (KM 14-15), which lay in the direct line of this wall, however, there was not a single trace of any wall of this size, and no apparent evidence of any filled-in trench, where it might have been. Either the wall made a detour to the north and then east at this point, or the southeast limit of the fortress was somewhere between the east side of L. T. E. and the old H. S. trench, in which the vertical stratum was found. On the other hand, this whole section of the hill was terraced during the Roman period and occupied by various small houses,

baths, etc., and during the construction of these every trace of older walls may have been cleared away, and the materials used over and over again.

*Materials* — In this period the older walls were torn down and the stones broken up and used again in the new walls. The great masses of Israelite masonry supplied abundant material, and little, if any, new quarrying had to be done.

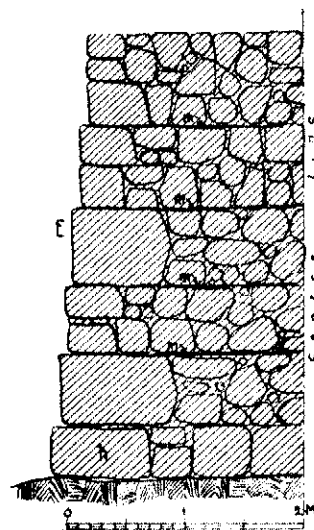
*Construction* — The thickness of the fortress wall was not quite uniform throughout its length. On the north, owing to the great depth of debris, the wall was uncovered in its full width at only two points. Here it was 3.75 m. thick at the top, ca. 4 m. above its footing on the rock. The wall was built in layers, varying from 65 to 75 cm. in depth. On the inside of the wall each layer was set back 11 to 13 cm. from the course below it (Pls. 20 c 6 and 21 a 6). The exterior had a batter of only 11 cm. in a height of 4.15 m. This exterior face was not built so well as either the interior here or the exterior faces on the west and south (Pl. 21 b 6). The stones were more irregular, and no attempt was made at fitting them, so that wide crevices were left. At the western end of the north wall, where it turned to form the northwest bastion, another wall had been built over the Greek Fort Wall, the newer portion being set back 36 cm. from the older part (Pl. 41 b 6). Of the northwest bastion only the eastern side was excavated, the rest being covered and partly destroyed by the heavy masonry of the Roman tower. Just south of this, as stated above, on the line of the west wall, was a breach in the wall, which had been repaired with rough rubble masonry of much poorer workmanship than the original wall. On this west side the older wall was better built and better preserved. North of the central west bastion it was 2.87 m. thick, and, while it was built in the usual courses, the batter was slighter than that of the wall south of the bastion (Pl. 39 b, c 6). South of this bastion the wall was 4.85 m. high and on the exterior had a batter of 33 cm.



53. Construction plan of Greek Fort Wall, on west, showing facing of headers (h) and stretchers (s) with rubble core (r) inside. Scale, 1:100.

In B 12, where the wall was well preserved and had not been restored or repaired, a section was made, in order to obtain the details of construction (Fig. 53 and Pl. 29 b, d 6). The wall was 4.2 m. thick at the base, and rested on the rock. The outer face followed the east face of the rock trench, a, of the wall of Jeroboam II. The masonry of the latter had for the most part been removed, the new wall running across the series of rooms inside it. The lowest course was laid with the old Israelite stones, which were placed on the exterior as alternate headers, h, and stretchers, s. At intervals of 1.5 to 2 m. these headers were continued through the wall, five or more stones being laid end to end, to act as ties. Inside the facing stones and between these ties the wall was filled up with rough rubble, r r, laid

in mud. The lowest course was 45 cm. high. The next was 61 cm., and likewise laid with large alternate headers and stretchers on the faces (Fig. 54). The courses above this varied from 58 to 78 cm. high, and were built of smaller, roughly squared stones, with fragments in the crevices on the surface. The mass of the wall was of small rubble, with here and there a single large block. At intervals of 1 to 1.5 m. there were headers of larger size extending into the wall from 70 cm. to 1 m. Each of these courses or sections of the wall was set back 5 to 7 cm. from the face of the one below it. Between the courses were layers of mud (m m, Fig. 54), not showing on the exterior.



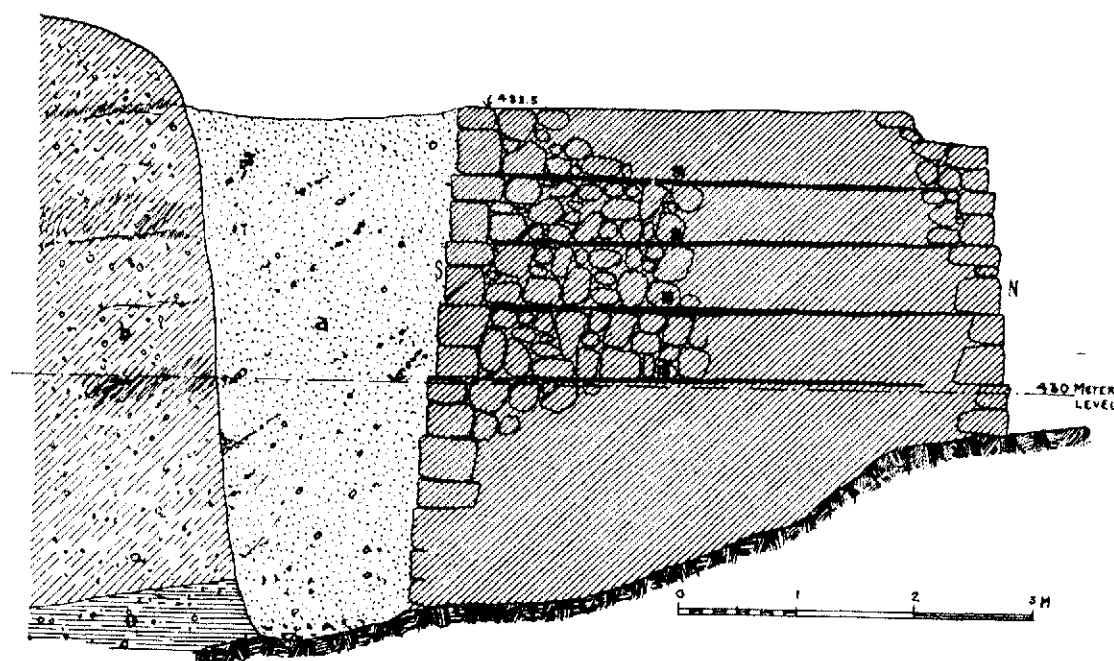
54. Half-section through Greek Fort Wall, showing coursing. Scale, 1:100.

The same features characterized the southwest bastion, except where the wall had been built around the old Israelite tower of Jeroboam (Pls. 28 a, b 6 and 29 a, b, c, d 6). The facing masonry was better laid, and the stones more carefully fitted. The same was true of the entire south wall as far as it has been traced. The whole southern end of the fortress was, therefore, of much more uniform and careful construction than the northern part. The regular courses were quite marked on the exterior face, but on the inner (north) face they were neither so regular nor so clear, the wall being in some places almost perpendicular. But this was true only of the portion near the southwest tower. It was certain, however, that this portion of the wall was used as the foundation for the thick curtain wall which connected the Roman tower at the south with the wing on the south containing the apsidal building, and most of this irregularity was due to patchings of the wall by the Roman builders.

In H 15, where the wall was cut through and destroyed by stone thieves, the construction was clearly visible (Fig. 55). Here the thick layers of mud which separated the courses were better shown than in the western section (Pls. 7 a 6 and 16 b 6). The wall was 4.24 m. high. The courses from top to bottom were 58, 57, 55, 60, 51, (38?), 54, 51 cm., and the offsets varied from 3.7 cm. to 8 cm. On the interior (north) face there were only five courses, as the rock sloped up here, and the distance from the top of the wall to it was only 2.7 m. The courses were from top to bottom 65, 47, 58, 60, and 40 cm., and the offsets totaled 22 cm. In G 15 the entire core of the wall for a distance of 9 m. was removed, in order to trace the southern façade of the Ahab palace below it (Pl. 11 b 6). The construction was similar to that in the west wall, although the large tying-blocks were not so extensively used. This was largely due, no doubt, to the fact that the wall rested on a massive Israelite wall, and not on a more or less irregular rock surface, and therefore the masonry could be laid with greater ease and stability.

The whole system of construction in deep horizontal courses separated by distinct layers of mud was characteristic of the Babylonian mud-brick walls, and

it seems clear that the builders of this great fortress at Samaria were influenced in their work by the method to which they had been accustomed, and which they naturally employed when using a different and strange material.



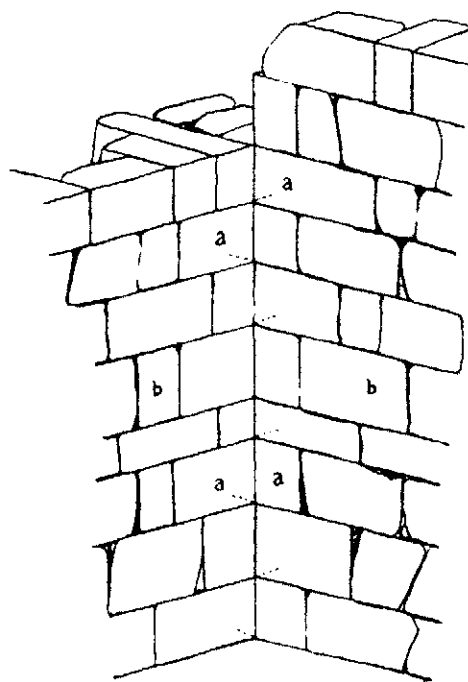
55. Section through south wall at broken east end. Scale, 1:100.

Very little remained of the buildings erected in the interior of this huge enclosure. It was, however, certain that the remains of the Ahab palace had been utilized to some extent by the new occupants, as is indicated by several new division walls and rooms built in connection with the older ones. The Ahab facing-wall along the west Omri scarp had apparently been destroyed at this time, for at its south end several rooms were built against it, their inner walls forming a new casing to the scarp (Pl. 10 a 5). Of these rooms No. 81 (see Plan 5 FG 13-14, where these rooms are shown instead of on Plan 6 where they properly belong) was 4.6 m. long. Its northern wall had been destroyed by the north wall of the later apsidal building. No. 82 was a long, narrow room 2.35 m. wide, its northern limits likewise being cut by the later wall. No. 83 was just to the south of No. 81 and was of the same length. Its width was 1.8 m. at the west and 1.7 m. at the east. The facing-wall, which had formed its east wall, had been removed. This room, together with the southern end of No. 82, was completely filled with the heavy masonry of the Roman period. The orientation of these rooms was that of the Ahab rooms, and they did not coincide with the Greek Fort Wall, an irregular space being left as a passage between the wall and the buildings within it. The exterior wall of the rooms appears to have been 2.8 m. thick, of which half was the older interior wall of the Ahab façade, and half an addition wall built against it during the new period. In G 12 were the fragmentary remains of rooms belonging to the same system as Nos. 81 to 83 (Pl. 8 b, c 5). A wall, k k (Fig. 38 on p. 111), 90 cm. thick, extended perpendicularly from Ahab's casing wall, h (here undisturbed), across p, the fine pavement of the Israelite room 13. (See also Fig. 22 on p. 97.) In this wall there was a doorway 1.2 m. wide. The older wall at the north end of this pavement was incorporated into the plan, and partly rebuilt. The new room was, therefore, 2 m. wide and of indeterminate length.

Later the floor-level here was raised 2.3 m. above this level, and a new wall and door, j, constructed (Pl. 8 c 5, 7). The line of the later wall coincided roughly with the earlier, but the door-jamb was 25 cm. farther to the west. Four courses of the earlier wall, k, 1.6 m. in height, were left when this reconstruction took place, and the space between the top of this and the bottom of the new wall was filled with debris, g. Another fragment of this period was found in G 11, where a wall parallel to the others was built westward from the exterior wall of the Ahab room No. 12. This wall was 4.5 m. long and 1 m. thick, its western end being the jamb of a door. To the west of these fragments in F 11 were several rooms of a building erected immediately over the ruins of the long west wall of the main Ahab building, and differing slightly from it in orientation. They were approximately parallel to the various fragments of walls just described as belonging to this period. Five rooms were left of this structure, but the walls had originally continued farther to the north. The outer wall was *in situ* to a height of one to three courses on the south and the east side only. On the east side it was 1.3 m. thick, and on the south 1.4 m. The interior walls were 80–85 cm. thick. Room No. 776 was in the southwest corner of the group, and was 2.55 by 5.7 m. Adjoining it on the north was a room 2.55 by 2.35 m. In neither of these was any door discovered, but in both cases the door must have been on the west side, where the wall was destroyed below the floor-level. In the southeast corner was a room 2.55 by 2.9 m., next to it another, 2.35 by 2 m., and north of this again a third, ca. 2.35 m. square. All of these opened into one another, but had no outlet to the east or south. The north wall of the last room was destroyed below the level of the floor.

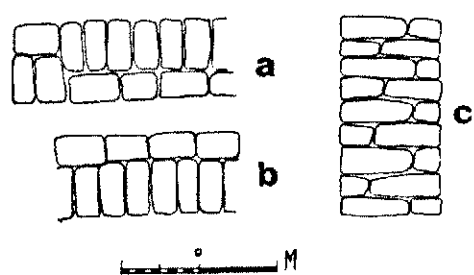
The walls of all the rooms so far described inside the Greek Fort Wall were constructed similarly. All angles of rooms and door-jambs were of large dressed stones bonding into each wall alternately (Fig. 56), while the faces of the door-jambs were bonded as shown at k in Fig. 22 on page 97. The remainder of the exterior face of the walls was of roughly squared stones laid to correspond to the courses established by the height of the quoins. The interior of the wall was of rough rubble, tied together at intervals by long headers running through. Mud was used for mortar throughout.

The other remains which are to be assigned to this period were of a somewhat different character. Along the inside of the west wall, in BC 10–11, were five long chambers perpendicular to the enclosing wall (Pl. 36 b 5). Their walls were built against it and did not bond into it, while the greater part of the masonry nearest the outer wall was destroyed by the excavations made during the construction of the Roman wall, which followed



56. Masonry in southeast corner of room 81.

the same direction here as the Greek Fort Wall. All these rooms were 9.5 m. long, and their width varied from 1.9 m. in No. 707 to 2.7 m. in



57. Masonry of long chambers inside west wall. Scale, 1 : 100.

No. 750. The walls of these rooms were carried down to the rock, and those of Nos. 322 and 706 were laid uniformly with large blocks, as shown in Fig. 57. The alternate courses were laid as at a, and those between them in the reverse, b, breaking joints with the adjacent courses. The south wall of the first room, 322, was built against the face of one of the Israelite rooms, and not over it, although it was of practically the same thickness.

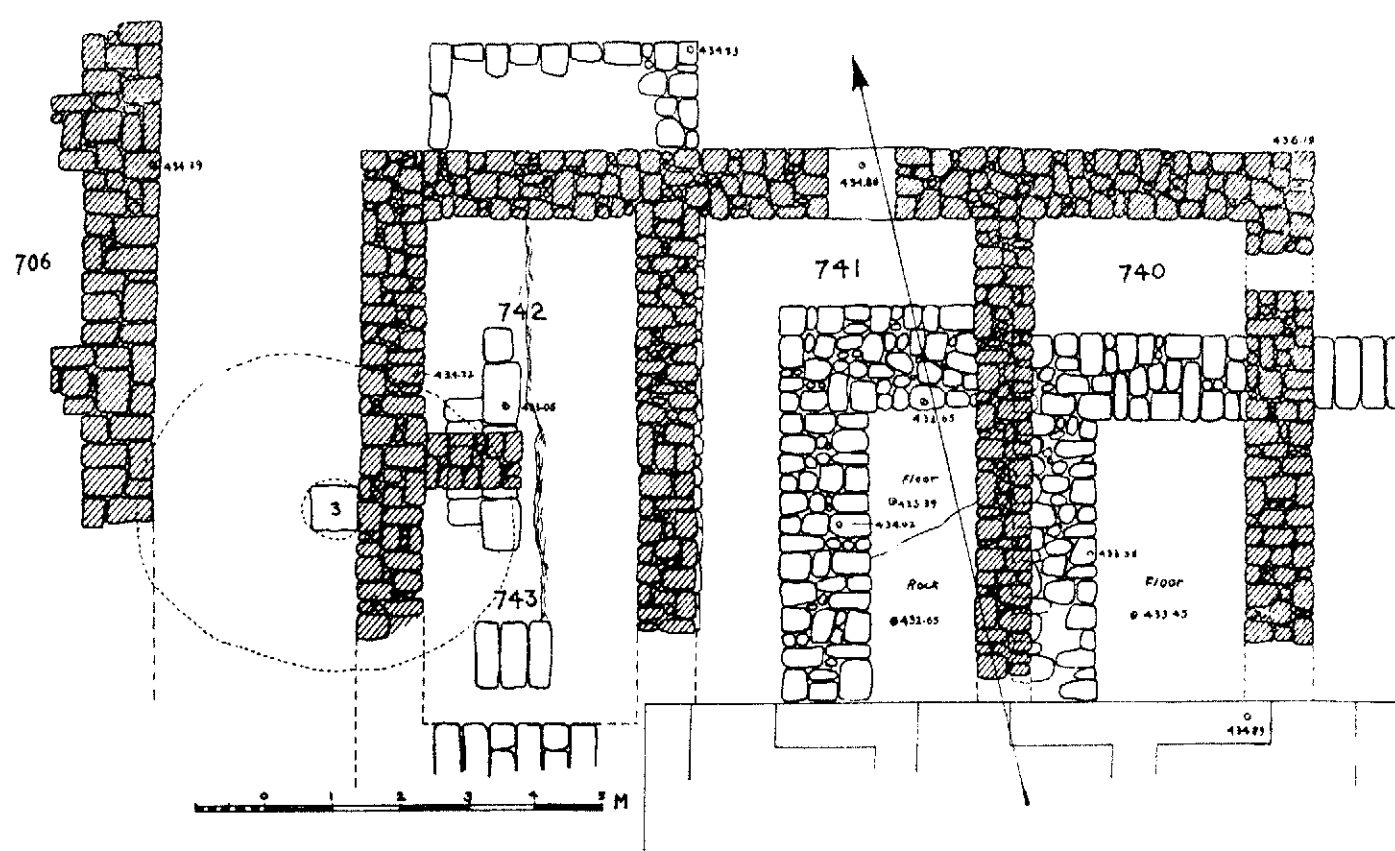
This wall was 95 cm. thick, while the others averaged 1.1 m. The walls of rooms Nos. 707 and 750 were not so well built, for, although large stones were used, smaller ones were also built in with them. The end wall, which ran parallel to the enclosing wall, was 1.1 m. thick, and was built of large blocks resting upon the top of the rock-scarp, on which the west façade of the Ahab palace had originally stood.

In C 8 an isolated fragment of wall 1.3 m. thick was found, which evidently belonged to this series, as it was not in alignment with the Israelite walls in its vicinity, and had been broken through by both the Greek and the Roman walls. The courses of this isolated fragment were laid as shown at c (Fig. 57), with alternate long and short stones running through the wall. Opposite the southeast corner of the west bastion of the Greek Fort was a series of well-built walls overlying one another. The lowest of these, resting on the rock, belonged to the structure of Jeroboam II (see p. 117). Over this had been built a fine wall corresponding to the walls of the adjacent long chambers described above (see Pl. 40 d, e). The stones for this second wall had evidently been taken from the earlier Israelite walls, but relaid in a much more careless and irregular manner. Farther north, below the floor of the Preherodian house D in Insula I, was another long stretch of wall of similar large blocks running over a fragment of the Ahab masonry (Pls. 41 a 5 and 54 e 5). Beyond this point were other isolated fragments of walls. Although these could not be dated with any certainty, they belonged most probably to the series of structures of this period which had been swept away by the successive rebuildings over and around them.

Below the Preherodian street Alpha, north of the smaller Roman vault, was another street or corridor with walls ca. 1 m. thick, of well-built masonry, but not of regular blocks. This was traced nearly to the north Fort Wall (Pls. 23 d 5 and 24 a 5), and on either side of it were the beginnings of cross walls. This certainly was earlier than any of the insula periods, and later than the Ahab period. Extending across the space below the Roman court was another long well-built wall resting on the rock. There were no other walls in its vicinity, and it was not orientated like the fort series, nor parallel to the north Omri scarp, near which it was built, but must, with the later walls built around the pool north of it, have belonged to the Post-Israelite period.

## b. THE OSORKON HOUSE (DE 11)

The Osorkon House was built at the northern end of the Ostraca House, over the site of the assumed northern rooms of that house (See Fig. 42). The superstructure of the Ostraca House had been destroyed except for a few fragments; and the southern wall of the Osorkon House was built in part over the foundations of the north wall of rooms 406, 407, and 408. The foundations of the assumed northern part of the Ostraca House must have been destroyed previous to the construction of the Osorkon House. Plan 2 shows the relative positions of the two houses, notably the displacement towards the west of the Osorkon House with relation to the Ostraca House. A passage 3 m. wide separated the western



58. Plan of Osorkon House, with earlier walls. Scale, 1:100.

wall of the Osorkon House from the row of long parallel chambers built against the Greek Fort Wall on the west. The eastern wall of these chambers (706, etc.) stood over the site of the western wall of the Ahab courtyard.

The width of the Osorkon House was 8.2 m. and the length 14.1 m., so that the east wall was not in line with the east wall of the Ostraca House, but was built against the door leading from room 406. The plan was very simple (Fig 58). A doorway 1 m. wide in the centre of the north façade admitted to the room 741, which was 4.1 m. by 7 m. (Pls. 35 b 5 and 37 b 5). To the west of this were two rooms, 742 and 743, each exactly 3.1 m. square. No door was found connecting them with the entrance hall, but they opened into one another. On the east was a space 3.1 m. wide, and of a length equal to that of the main



hall. If this was subdivided, as seems probable, there was no trace of the foundations of the division wall remaining. On the exterior façade opposite room 742 was a solid mass of masonry, 1.6 m. by 4 m. This was built against the wall on shallow foundations, and was probably the foundation for a pedestal of some sort.

The walls were carried down to rock. The masonry was of large stones not fitted by dressing, but well built, with smaller stones in the crevices. The thickness of the walls varied from 85 cm. to 1 m. In the debris in room 741, near the north wall, were the fragments of a large alabaster jar bearing the cartouche of Osorkon II (Pl. 54 b).

#### c. WEST GATE

Along the western end of the city a section of the Post-Israelite wall, 61 m. long, was uncovered (Pl. 43 a, b 6). This was behind and parallel to the later Greek wall, and like it approximated the line of the steep modern terrace of the hill. It was first found at the north tower of the Roman gate, behind which it ran, being concealed by the Roman masonry. No trace of it appeared in the excavations in front of the south tower or on the upper cliff on the south of the summit. Unlike the preceding Israelite wall, it probably followed the lower cliff eastwards inside the line of the later Herodian wall.

Where it appeared from under the Roman wall in G 3 (Plan 10) it was orientated 22° west of north. It occupied part of the old Israelite trench, and was built against the rough rock-scarp on the inner (i.e., east) side. At its base it was 3.67 m. thick, and it was built up in courses 50 to 70 cm. deep, with offsets of 5 to 8 cm., as in the summit fortress wall, with which it was identical in construction (see Pls. 44 c 6 and 43 a 6). The height, so far as we excavated, was for the most part not over 1 m. to 1.5 m., but where the wall approached the Roman wall there were five or more of its courses *in situ*. Here its outer face was destroyed, probably by the Roman construction trench, and the gap was afterwards filled with small square stones, laid without a batter. This break was above and in line with the group of large blocks forming the face of the tower of the Israelite period, and between the top of the Israelite masonry and the bottom of the later filled-in wall was debris 90 cm. deep. At a distance of 17 m. from the corner formed by the meeting of this wall and the Roman wall was a bastion, similar to those on the summit (Pl. 43 b 6). This projected 4.3 m., and had a width on its exterior west face of ca. 13 m. This width is an inference, as the other corner of the bastion was destroyed, but a part of the inner face of the north side was still *in situ*. The south wall was 3.45 m. thick, and the west or outer wall 4.45 m. Of these walls scarcely a metre of height remained, and the interior of the bastion was filled with fallen masonry, fragments of later walls, and debris, above all of which was a small house of the Roman period. The outer face of the bastion had a magnetic bearing of 19° west of north. At 8 m. to the north was another, smaller tower of solid masonry, which was not rectangular, but



narrowed slightly as it extended out from the wall line. It was 7.6 m. wide on its west face, and projected 5.7 m. on the south side, and 5.3 m. on the north (Pl. 44 d 6). Only one course was *in situ*, with the stones laid as they were in the main wall. The outer face was orientated  $8^{\circ}$  west of north. Beyond this tower the wall was traced for another 16 m. to the end of the trench, in a direction  $10^{\circ}$  west of north. Outside of this face (AB 1-2), and parallel to it, at a distance of 2.09 m., was the edge of the shallow rock trench representing the old Israelite wall.

### CHAPTER III

#### THE PREHERODIAN TOWN, WITH THE UNDERLYING FRAGMENTS OF HELLENISTIC WALLS (See Plan 7)

[ 300-60 B.C.]

Summit quarter — Streets — Insulae I-VI — Houses — Shops — Lower Terrace quarter — Insulae VII and VIII — Other houses — Architectural details — West gate — Walls on eastern slope of hill

During the Hellenistic period the site continued to be a large fortified town. A new wall was built around it, occupying in the main the same position as the preceding Israelite and Babylonian walls. The area thus enclosed may be divided into two parts, an upper and a lower. The upper part stood on a platform of lightly terraced debris held in place by the Greek Fort Wall. The superstructure of the Fort Wall had disappeared, and the high terrace wall which marked the edge of the upper part of the Preherodian town lay beyond the Fort Wall. Thus the outer houses of the upper town extended over the Fort Wall; but as these outer houses were almost completely destroyed, the upper part of the Preherodian town is here considered as limited to the area within the Greek Fort Wall. Here the more important houses stood arranged in groups or insulae surrounded by narrow streets. The lower part included all the remainder of the city outside the Greek Fort Wall, and was terraced according to the slope of the hill. This area likewise was divided in the last Preherodian period by narrow, irregular streets. Only the western part of the upper quarter and a part of the lower terrace to the south of it have been excavated. These excavations and those carried on at and near the west gate of the city, and in the ruins of a large building below the Roman Basilica, furnished all the material which we found of this period.

The last Preherodian town was fairly well preserved. But the case was different with the older Hellenistic towns, the walls of which often overlapped, and were so complex that the subdivisions of the earlier part of the period were not always clearly to be traced. This overlapping was due to the constant decay and rebuilding of the houses, often on the old foundations, and to the alterations made in the interior arrangement during occupation. Where the walls were best preserved, three sub-periods could be distinguished, but these three periods were not represented in all the houses.

##### 1. THE SUMMIT QUARTER OF THE PREHERODIAN TOWN

The highest point of the new platform was the court of House A in H 11. See Plans 2 (blue walls) and 7, and sections A-B on Plan 3 and G-H on Plan 4. It was 438.87 m. above sea-level, or 47.78 m. above the entrance gate on the west.

Five of the streets in this area have been traced, and have been designated Alpha, Beta, etc. The principal street was Alpha, which extended from the north side to the south side of the terrace, with an orientation of  $12^{\circ} 15'$  east of north. At its northern end it was 2.5 m. wide, and retained this width as far as F 8. Here must have been an offset (subsequently destroyed by the Roman vault), inasmuch as the street continued south of this with a width of but 2.1 m. Parallel to Alpha and 26 m. to the east was Street Gamma, which must likewise have extended the whole width of the summit, although its northern half was entirely destroyed. Street Beta ran at right angles to Alpha and Gamma, about midway of the summit, starting from Alpha and extending indefinitely towards the east. Only its south side remained, unless we may assume that a fragment of masonry just south of the Roman vault belonged to the north side, in which case the width of Beta was three metres. From the lower end of Alpha another street, Delta, started west, but only a few metres of it remained. About half way between Delta and the northern limit of the terrace there seems to be another small road, Theta, separating Insulae I and III. Along the western edge of the town ran another street, Eta, traces of which were found at the southwest corner and near the northern end. Along the northern edge also indications were found that a similar street had existed there. It may be that during the earlier Hellenistic times there was a street all around the edge of the summit inside the Greek Fort Wall.

The insulae have been numbered I, II, etc. Insula I was west of Street Alpha in the northwest corner of the summit. Insula II was east of Alpha and north of Beta. Insula III lay west of Alpha, the division between it and Insula I being apparently Street Theta. Insula IV lay east of Alpha and south of Beta, and contained not only the most important dwellings of the town, but the best preserved as well.

#### a. INSULA I

The block of houses called Insula I occupied the northwestern corner of the enclosed terrace, and had been very much cut to pieces by the inner corner of a Roman tower and by a series of long parallel foundation walls of the same period. For this reason, though the rooms were found in groups, these groups were so isolated that they could not be combined into a satisfactory plan. The extent of this insula was, for similar reasons, not easy to determine, but there would seem to have been four houses. Street Alpha was clearly the eastern boundary of the insula, but only the ends of the cross walls, where they were bonded into the continuous street wall, were *in situ*. The other house walls had been destroyed by the subterranean corridor west of the Roman court. The street Eta, along the western edge of the platform, was the western limit of the insula, but the west wall of the insula had been destroyed by the street walls of the Roman periods.

*House D*—Between the long Roman foundation walls, where few cross walls broke up the plan, a fairly complete group of rooms was found. Here the sub-periods of occupation, of which evidences were found all over the site,

were more completely shown than elsewhere, with the exception of House A in Insula IV. The level of the street during this period was 433.44 m. (see Plan 7 C 7), and the earliest house-level was 51 cm. above this. Room 3 was apparently the courtyard, 5.3 m. by 8.6 m. in dimension. This may have been originally subdivided, and the dividing wall destroyed during one of the later building periods. Nearly in the centre of this courtyard was a cistern (S11 cistern 3). The rock surface here was 2 m. below the level of the court.

Above the rock was built the shaft of the cistern, composed of flat slabs laid on edge overlapping alternately at the corners. The upper part of this shaft had been removed during the construction of the Roman walls. The bottom of the cistern was ca. 7 m. below the level of the house. The shaft opened, not as usual over the centre of the cistern, but at its extreme northwest corner, and the cistern itself was not bottle-shaped, but was a large, irregular cave, which had been altered for the purpose. Its dimensions were 3 m. by 7.75 m., but originally it had been of greater extent, or rather had been connected with another cavern. Across the southern end a wall had been built, cutting off an extension in that direction. The opening to this extension began 1.76 m. above the floor of the main cave. On the northeast side was another wall, filling up an opening which began 1.56 m. above the floor. When this wall was removed it was found to open on to a passage, 1.3 m. long and 1.16 m. wide, leading to a rock-scarp or natural hollow in the surface. Across this hollow the Ahab foundations as well as the succeeding Roman walls had been carried, so that it was evident that the caverns had existed before the erection of the Israelite buildings, and belonged no doubt to the series of similar caverns found at other points. The interior of the cistern had been coated with the usual gray cement, which covered the rock surfaces as well as the masonry in the openings, and this was deeply scratched with the criss-cross markings found in other cisterns of the period.

North of the court was a space 3.7 m. wide and of the same length as the court. This had probably been divided into two or more rooms, but all traces of the division walls had disappeared. On the south side were two rooms, Nos. 2 and 7, of which only portions of the walls remained. Still another room lay between these and the street which appears to have existed there.

Later in the last Preherodian occupation the house was reconstructed. A new east wall was built 80 cm. inside the old one, leaving a long narrow space, 8, between them, which may during this period have become part of the house adjoining it on the east. The western wall also was built farther in, so that the whole house was narrowed considerably. The south wall of the court remained the same, but the north wall was moved back 40 cm., resting partly on the remains of the first wall. To this second period belonged the *tannûr*, or oven, at the western end of the court. The space north of the court was divided into two rooms, 4 and 6, by a rough wall, built slantingly between the older walls. On the south, room 2 was divided by a cross wall into two narrow chambers, which probably had doors connecting them with the court and with room 1 on the south. One jamb of the latter belonging to this period was still *in situ*.

*House B*—Of the house in the north end of the insula but little remained. Its court appeared to have been 14, but the entire west and north and most of the east side had been destroyed by later walls. From its southeast corner a door 85 cm. wide led to room 10, the dimensions of which could not be determined. To the east of this was a small cistern (S11, cistern 1), but whether belonging to it or to the adjoining house was not certain. On the south a door with only one jamb *in situ* opened into a large room (13), which was 3 m. by 5.5 m. Near the inner wall of this was cistern No. 13. The shaft was circular and built of small stones arranged radially. The cistern was 6.1 m. deep and was bottle-shaped. On the east a door led into room 9, the size of which, like that of 10, was not determinable. On the west another door led into room 5, which originally had been 3 m. by 3.35 m., but during the second period a wall had been built across it in line with the west wall of House A. In room 13 was the only trace of the floor-level of the original house. This was 433.36 m., and the floor of the second period was 1.69 m. above it. The court (14) of the second period was 58 cm. below the latter. The foundations under the north wall of 13 were carried 69 cm. below the floor of the room, and those of the east were 1.2 m. below the door-sill. The north end of the house was destroyed by the corner of the Roman tower and by walls built later in connection with it. Part of another house, belonging probably to the final Roman period, was built over this portion of House B. Of this later building two rooms, 11 and 12, were found. The floor of the former was only 10 cm. above that of the court, 14. In this room were several fragments of stucco, grooved to represent rusticated stones, 40 cm. by 80 cm.

*House A*—As stated above, the house in the northeast corner of the insula was almost entirely destroyed by the long Roman vault. There remained only its outer wall along Street Alpha, with the ends of its cross walls (Pl. 23 c, d 7). This house was entered from Street Alpha, the level of which was 435.49 cm. at the north end. The level of the house floor was 434.95, or about one metre above the early floor in House D. Therefore this insula must have been terraced near the middle, similar to Insula IV. From room 906 a conduit, 26 cm. wide, passed through the foundations and turned down the centre of the street towards the north, discharging its contents over the northern edge of the platform. During the later period this channel was rebuilt with a width of 56 cm. It was then covered with large flat slabs, the tops of which formed part of the street surface. Other than the cistern mentioned to the east of room 10 of House B, which may have belonged to this building, there was no cistern found, although it is quite possible that one is buried below the walls of the vault. Below rooms 902-903 was a cellar (941), the ceiling of which was supported in the centre by a square pier (Pl. 21 c).

*House C*—This house, in the southeast corner of the group, had, like A, only the east wall and the beginnings of its cross walls *in situ*. Pl. 23 c shows the walls of Houses A and C with those on the opposite side of Street Alpha, looking towards the south. In Pl. 23 d the floors and later walls are removed, showing the house walls cleared to the bottom of their foundations. In room 909

was a portion of stone flagging, 40 cm. above the latest street level, and a cistern (No. 1). This flagging may belong to the court of the house. Another cistern, subterranean corridor No. 1, was found below the floor at the southern end of this corridor and within the probable limits of House C. The exterior walls of these houses facing on the street were built of squared stones, laid irregularly as headers and stretchers, with an occasional stone set on edge and running up through two courses and also through the wall as a tie.

Below the floor of the smaller Roman vault were parts of two rooms (Pl. 22 b, c, d 7 and 23 a 7). The floors of these were ca. 2 m. below the street level, but the walls were in line with those of the houses to the north and west. In the east wall of each room a door opened, and opposite that on the north was a cistern (Vault Cistern, No. 2). The cistern was directly under Street Alpha, which continued to the south of the vault. The floor of the south room was covered with a thick layer of bright red powder, probably the decayed remains of colored plaster. Like room 941, these two rooms appeared to form a cellar whose walls and roofs supported the walls and floors of the rooms and the street above. The construction of the vault had necessarily destroyed all traces of the roofs and of the stairway which must have given access to the cellar. East of cistern 2 clear remains were found of the wall which served as the foundation wall of the eastern side of the street. Vault cistern 1, which was east of this wall in rising rock, belonged to a house which stood in the southwestern quarter of Insula II. The mouth of vault cistern 1 opened on the upper Preherodian floor-level.

#### b. INSULA II

The group of houses called Insula II lay to the east of Street Alpha and north of Beta, and covered approximately the same area as the great court of the Herodian Temple. All the walls within this limit, excepting those near the western side, were razed, and the material may have been used for filling up the podium of the Temple, the top of which was 2.85 m. higher than the floor of Insula IV (see p. 177). The western side of the insula was in the same condition as that on the opposite side of the street. The long street wall was *in situ*, with parts of the cross walls. Only in one room (916), at the north end of the block (house B), was an inner wall *in situ*. Here was cistern S9, No. 3, with a square shaft placed diagonally in the room. The shaft was built with slabs on edge, bonded at the corners. At the lower end of the street was cistern S9, No. 2, in room 912, which belonged to the House D of this group. Vault cistern 1 also belonged to this group.

#### c. INSULA III

In Insula III the destruction was less extensive than in Insulae I and II, but the greater part of the plan could not be made out, owing to later rebuildings and foundation walls. The large Roman Atrium House occupied most of the southern side. This insula was perhaps the smallest on the summit, and was of irregular shape. It was bounded on the east by Alpha, on the west by Eta, on the

south by Delta, and on the north by a small street running west from Alpha. Its dimensions were 22 m. by 35 m., and it contained apparently four houses.

*House B*—This house occupied the northwest corner of the insula, and was the best preserved of the group (Pl. 40 a 8). Room 810 was the principal room. It was 3.3 m. wide and 5.3 m. long, and its floor-level was 433.74 m. Nearly in the centre was a pier 68 cm. square, which had once supported the ceiling. West of this room was a long space (804 and 805), 2.3 m. wide and 8.2 m. long. As there were two doors opening into this from room 810, it may have been divided into two rooms. On the north side of 810 a door led into room 816, 2.14 m. wide, with its east end destroyed by the corner of the foundations enclosing the Roman court. On the east two doors led into room 811, which was 2.2 m. wide, and probably had been subdivided. Above and partly within room 812 was a circular vat of the Severan period, like those over the Atrium House.

East of this group of rooms were the remains of four rooms, 815 and 821–823, with a higher floor-level. These were ca. 2.9 m. square, but were largely destroyed by the Herodian masonry. These four rooms were separated from house B by what appeared to be a narrow alley (814), and they probably belonged to another house (A), of which the other walls were broken up by later work.

*House D*—This house was in the southwest corner of the insula. Portions of only three rooms were *in situ*, although the entire west wall could be traced. The rooms were all small, and of no special significance (Pl. 36 b 8). Rooms 716 and 721 had been altered in the later occupation, and afterwards broken through in the centre, leaving the ends of one period remaining on one side of the room and the ends of the other on the opposite side. Along the west side several ends of the division walls, where they were well bonded into the main outer wall, were still *in situ*. In the corner of one of these rooms (806) was found the beautiful marble torso of a youth (Reg. No. 4001). The east wall of this insula was used in part for the foundation of the east wall of the Atrium House, and to that extent was preserved, but all the other walls of the eastern part had been swept away. The floors of House D were not preserved; but the canal leading to cistern 5 (S7) indicates that the floors were nearly on a level with those in Insula VI (i.e., ca. 436+ m.), or about two metres higher than the floor of House B. The floors of the four rooms east of B showed a level about half way between these two. Thus Insula III was terraced internally like Insula IV and others.

House D had two cisterns, S7 cisterns 4 and 5, which appeared from their contents to have been filled up at about the same time. Cistern 4, on the west, descended through the roof into the small northern cave which opened in the Ahab rock-scarp. The entrance of the cave had been walled off and the irregular interior cemented as usual, but the cistern may have been unsatisfactory on account of leakage. Cistern 5, about five metres to the east, may have been excavated as a substitute for 4. It was of the usual bottle-shape and measured 3 m. by 3.7 m. at the bottom. From the rock, 2.62 m. below the Atrium floor, the shaft of the cistern, being 56 cm. square, was carried up with large blocks laid as stretchers on edge and bonded at the corners. The conduit opened into the

shaft at a point 2.3 m. above the rock and was followed as far as the Preherodian street south of the insula. The shaft probably rose above the conduit and terminated in a curb above the floor of the room which the cistern served.

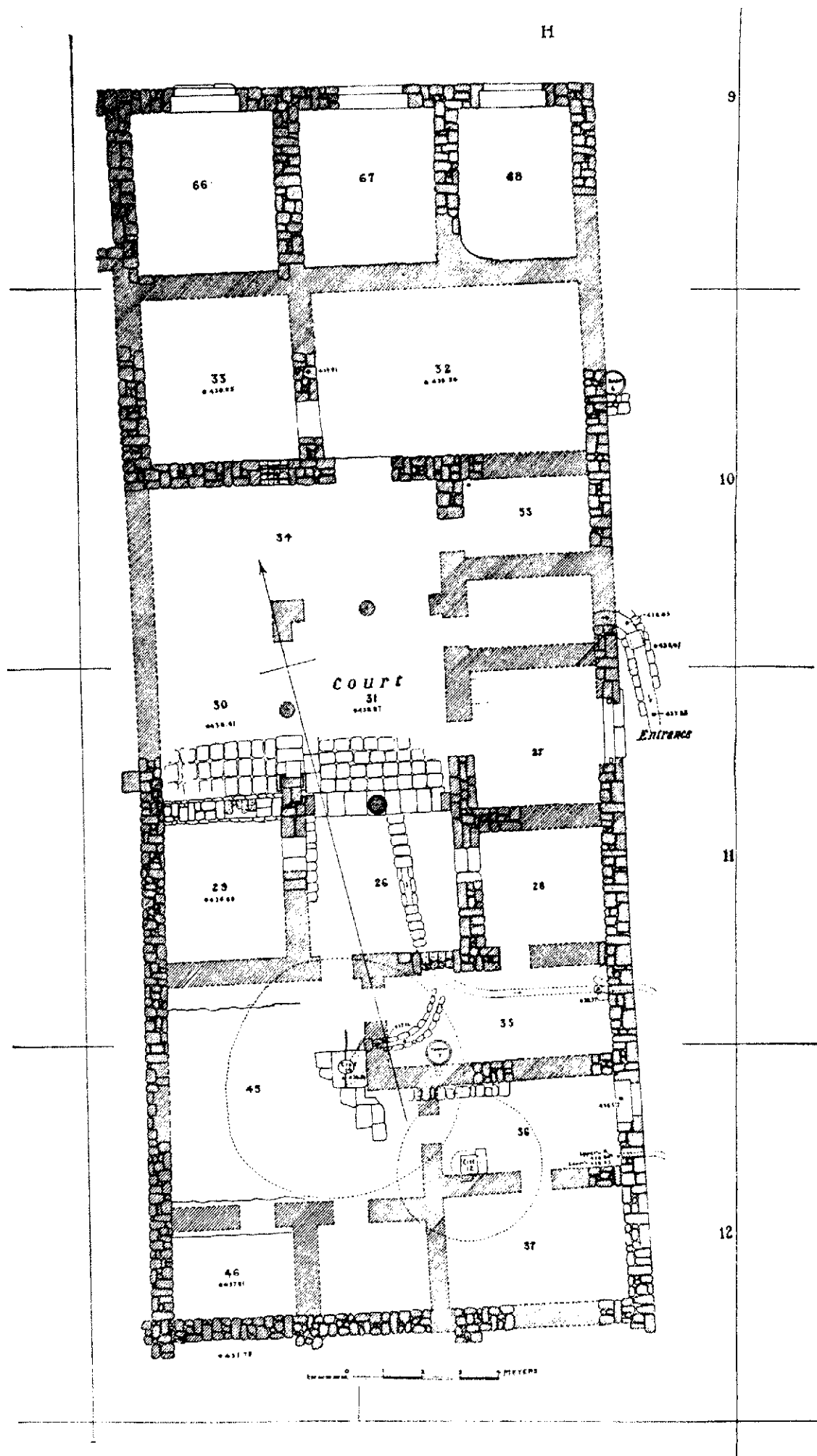
#### d. INSULA IV

Insula IV (FH 9-13) contained the ruins of four houses, more elaborate in plan and of better construction than any other buildings of the period thus far uncovered. The insula was ca. 26 m. wide, and extended from the Street Beta nearly to the south wall of the terrace. At the north end a row of shops extended the entire width of the block opening on to Street Beta. A continuous wall, extending from the north to the south end, divided the insula into two approximately equal parts, the level of the eastern half being 1.07 m. above that of the western. Houses A and C occupied the eastern part, opening on to Street Gamma, while Houses B and D occupied the western half, opening on to Street Alpha. Houses C and D were respectively lower than A and B, because of the slope of the summit towards the south. House A, probably with C, was built first, as the walls of B and D were not bonded into the long division wall, but built against it.

The northeastern portion of the insula was the part best preserved. It was enclosed by the foundation walls of the Roman cella, and preserved in the 2.85 m. of debris below the floor of the latter. Some of the walls of House A near its court were intact to a height of nearly 2 m. (Pl. 5 a 8). The inner eastern temple wall cut through the rooms along the east side of the house, leaving, however, the corners of the various rooms *in situ*. The two parallel north walls of the Herodian building, with the third wall built when the temple was restored by Severus, made a large gap in the plan of the northern end (see Pl. 6 a 8), but between them were the rooms forming the north end of the house, while the row of shops of House A remained intact below the later Severan portico. The two west walls of the temple cut through the Houses B and D, and left only fragments of the house walls between and outside of them. Any attempt at reconstruction of the southern half of the group was hopeless. Here the south wall of the temple and the foundations of the large apsidal building to the south of it had left hardly a trace of the foundations of Houses C and D.

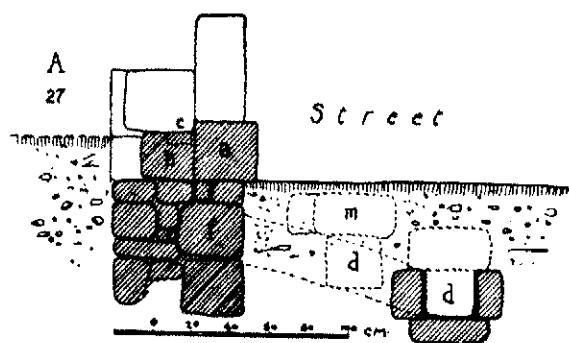
*House A, Plan* — This house serves as a type of the better class of dwellings of the Preherodian period (Fig. 59). It was 28 m. long, 12.5 m. wide at its northern end, and 13.2 m. wide at the southern end. It was, therefore, not quite rectangular in plan, and was somewhat narrower in the middle than at the ends. The entrance was from Street Gamma, through a rather imposing doorway, 1.39 m. wide (Fig. 60). The sill had two steps, the inner, b, 5 cm. lower than the outer, a. The edge of the inner step was in line with offsets in the jamb, 25 cm. wide. On the inside these offsets were 22 cm. deep, and on the lower sill contained two rectangular sockets, c, for the door posts. The door admitted to a small vestibule (27), 3.2 m. long and of uncertain width. Opposite the entrance a smaller door led from the vestibule to the central court of the





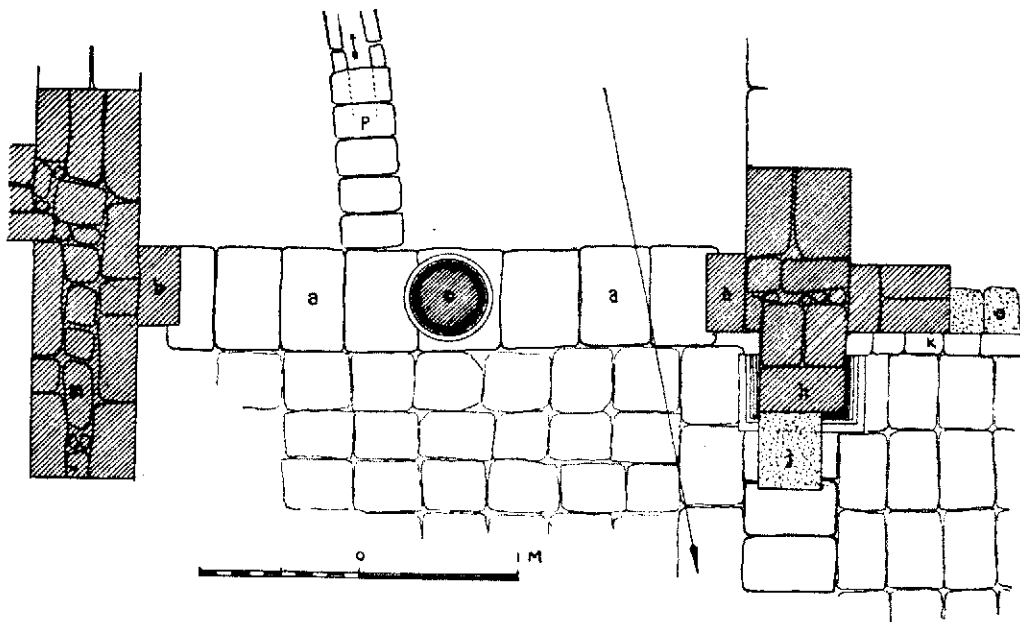
59. Plan of House A, Insula IV, restored. Scale 1:150.

house (31). This court was 3.92 m. wide and at least 5 m. long. Its northern end was one of the parts destroyed by the temple walls. The court was paved with slabs of stone, roughly fitted in rows. Its level was 438.87 m., or 4



60. Section through sill of main entrance.  
Scale, 1:40.

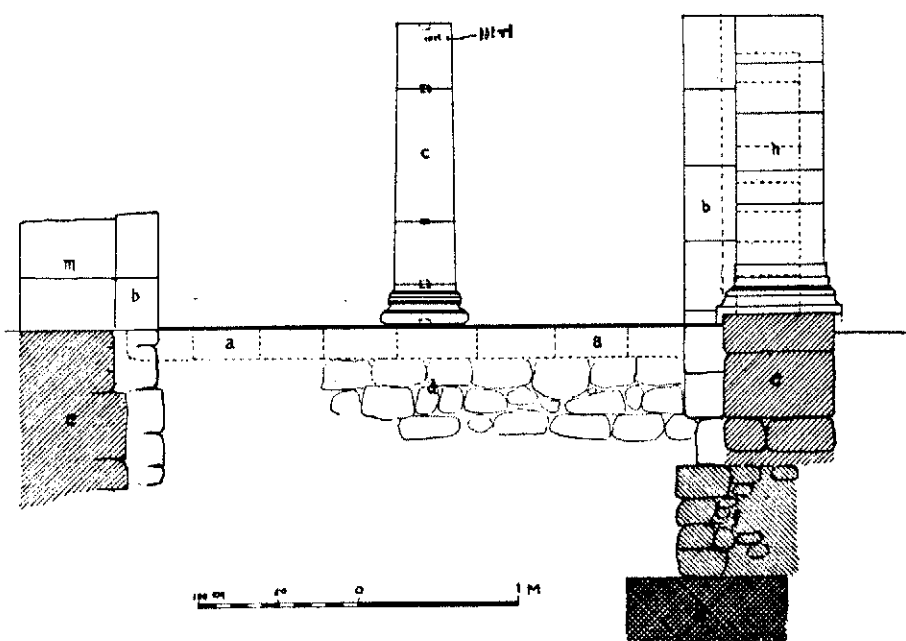
cm. below the outer sill of the door and 40 cm. above the street. On the south and west sides, and probably on the north as well, were porticos, the roofs of which were supported on single columns between antæ (Figs. 61 and 62). The portico on the south, No. 26, had parts of both antæ, b b, *in situ* as well as almost the entire column, c (Pls. 5 a and 6 d). Its floor was raised 2 cm. above the court and had a curb, a a, across the opening, composed of slabs ca. 40 cm. wide and 62 cm. long, resting on a rough wall, d. The antæ, b b, were quite plain and without bases. That on the east projected 27 cm. and that on the west 33 cm. The latter, consisting of four courses of dressed stone, was preserved to a height of 1.95 m. In the centre of the opening was the column c, preserved to the height of 1.9 m. Its diameter was 38.5



61. Detail plan of court 31 and entrances to porticos 26 and 30. Scale, 1:50.

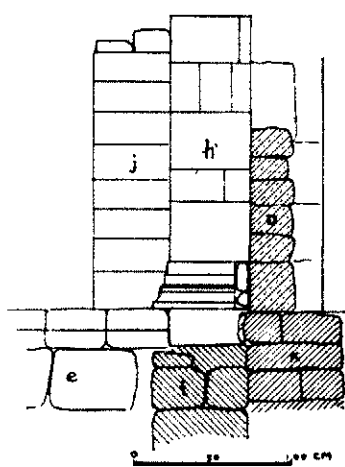
cm. at the bottom and 35 cm. at the top. It had a well-proportioned Attic base, 26 cm. high (Fig. 64, a), the lower torus of which was raised by an offset to the height of 1.6 m. above the stone flagging. Three drums were still *in situ*, respectively 39, 84, and 41 cm. in height. The top drum had a mason's mark (see Fig. 62). On the top and bottom of each drum and of the base were square dowel holes. The dowels must have been of wood, as no trace of them remained. The portico 30 on the west of the court seemed to have been the more important. It was 3.05 m. wide, and was paved with regular rows of rectangular slabs (Figs. 59 and 61). The curb across the opening was laid with slabs, ca. 35 cm. wide and 60 cm. long. These were 26 cm. thick, and rested on a wall, e, of roughly squared stones 1.6 m. deep, which in turn rested on the remains of an earlier wall (Fig. 62, b). The top of the curb was 7 cm. above the floor of the court, while the paving in the portico itself was 6 cm. below the court. The antæ,

of which only the south one was *in situ*, were constructed of well-dressed masonry, with bases of fine contour (Fig. 64 b). At some later time the opening of the portico was decreased in width by an additional layer of stones, j, built against the face of the older anta and over its base. The south side of the portico was a wall, o, which did not bond into the wall in line with the anta, but was built against it. It was only 43 cm. thick and rested on an earlier wall, k, whose top reached almost to the floor-level. Against the north face of k an additional wall, i, had been built. Both these walls belonged to an earlier house. There had been originally a door, o, 82 cm. wide, leading into room 29, but this had been blocked up. (Pl. 6 b shows blocked door, looking north into room 29.)



62. Elevation of portico 26. Scale, 1: 50.

At the north end of the house two rooms were left. No. 32 was 6.85 m. long and ca. 4.25 m. wide. It was entered by a door in its south wall, 1.48 m. wide. This opened on to the portico, which, as indicated on the plan (Fig. 59, p. 141), probably continued around this side of the court from the west. In the west wall a door, 98 cm. wide, led to a room (33), 3.8 m. by 4.25 m. This room also had had a door, subsequently walled up, opening on to the portico, with which it communicated by three steps. No. 33, like the adjoining room 32, was 30 cm. below the court.

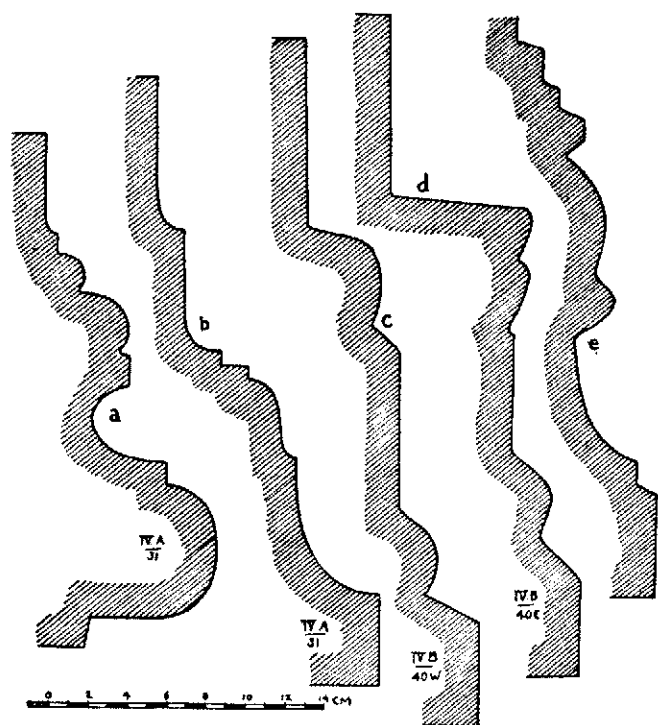


63. Elevation of south anta of portico 30. Scale, 1: 50.

In the southern part of the house, room 29 was originally 3.05 m. wide and 3.8 m. long. The south wall of this room had been destroyed above the floor-level, but was traced by its foundation. The lower courses of stones were still *in situ*, and showed that the wall was of rough rubble, 70 cm. thick. During a later reconstruction the wall had been rebuilt 50 cm. farther south, but the only trace of this was the trench left by the stone thieves, who had taken away all the masonry. Of the east wall only the north jamb of the door remained. The sill consisted of slabs laid on a rough wall, 92 cm. high. This foundation wall rested on an earlier wall (f, Fig. 62), 68 cm. deep, the face of which was in line with the west anta of the

portico. This earlier wall in turn was built on the fine wall g of room 12 of the Ahab palace.

Portico 26 was 3.82 m. wide and 3.67 m. long (Figs. 61 and 65). It had a floor of hard-packed earth, beneath which ran the conduit described



64. Details of moldings in Houses A and B. Scale, 1: 4.

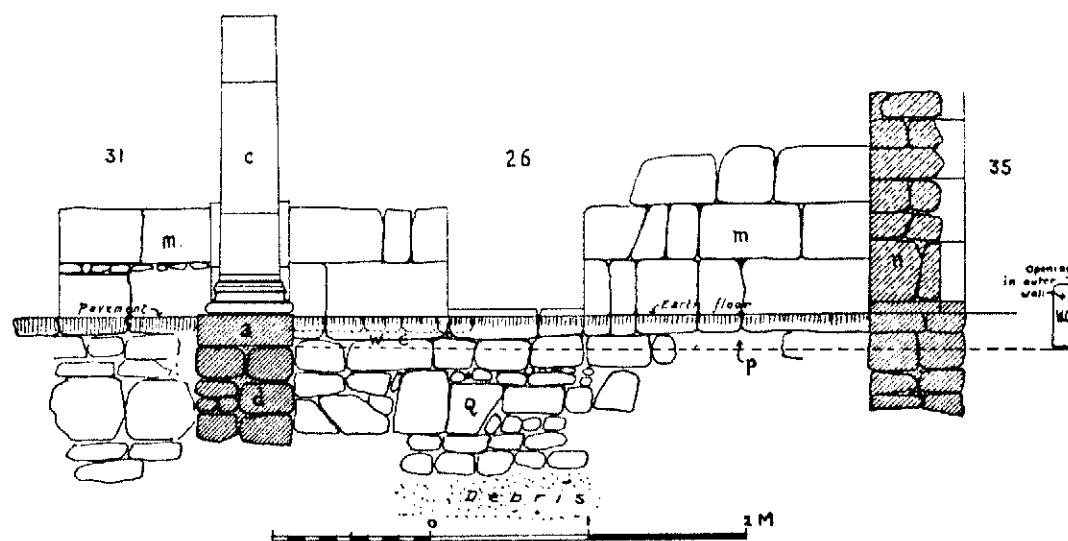
- a. Base of column in portico of A 31.
- b. Base of anta in portico of A 31.
- c. Base of west anta in portico of B 40.
- d. Base of east anta in portico of B 40.
- e. Base of anta from debris.

below in the paragraph on Drainage.

In the southeast corner was a door, afterwards blocked up, leading to room 35. The east wall, m, of this portico was built on a foundation, q, of squared stones mixed with rough rubble, about 1 m. deep, resting on loose debris. On this side a door, 1.23 m. wide, led into room 28, which was 3.03 m. by 3.1 m. The inner east wall of the temple had cut through the centre of the room, leaving the outer wall intact, with the ends of the cross walls on either side. In the south wall was the jamb of a door leading into room 35, which was 2.35 m. wide and apparently extended into the second court, No. 45. Another door had opened directly on to the portico 26. A

later wall had been built across the end of this room in line with the west jamb of the door to the court. South of the portico was another court, 45.

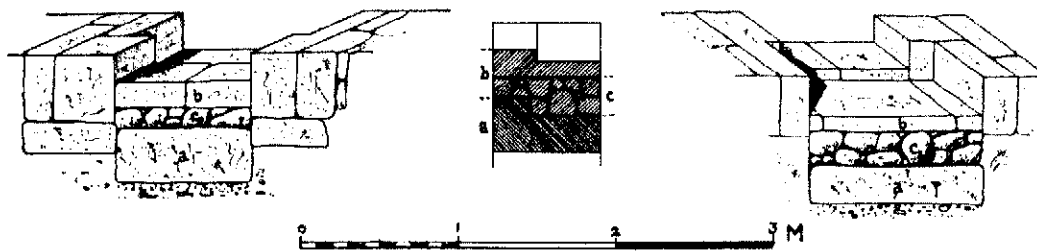
A portion of the east wall was *in situ*, and the west side was the long division wall between the two houses A and B. The south wall had been entirely removed by stone thieves,



65. Section through portico 26. Scale, 1: 50.

but a trench similar to that forming the later south side of 29 determined its position. The court was L-shaped, 5.3 m. long, 5.1 m. wide at the north end, and 5.7 m. wide at the south. It was paved with roughly squared slabs, in which near the northeast corner was cut a circular hole 35 cm. in

diameter, the mouth of a cistern (No. 14). To the south and east of this court were three small rooms (36, 37, and 46), the walls of which were in fragmentary condition. In 36 was another small cistern, No. 12. This room had an exit to the street, 85 cm. wide (Fig. 66).



66. Smaller entrance, House A.

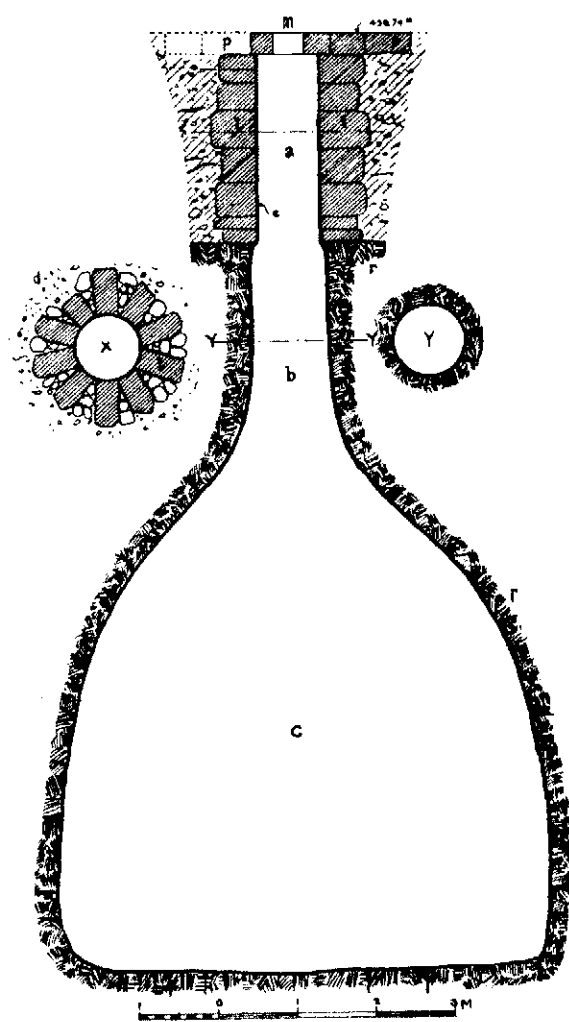
The sill was 26 cm. below the main door of the house in room 27, and was built of a single block of stone, with a low step on the inside, a, while the jambs of the door had offsets, like the main door. The earth floor in court 45 was 13 cm. below the floor of court 31, while that of room 46 was 1 m. below. This floor, however, may have belonged to an earlier house.

At some subsequent period in its occupation the lower end of the house was cut off, and used as a separate house. The doors leading from the court 31 to 35, etc., were blocked up, and court 45 became the court of the new house, with its entrance through the outer door in 36. The level of this door was raised 29 cm., and a new sill, b, of smaller stone was laid on a layer of rubble, c. In the main house several of the old doors were also blocked up, as described above, and the anta of the portico 30 refaced (Pl. 6 d).

*Construction* — This house contained the best masonry of the period. The walls were, as a rule, 65 to 70 cm. thick, and laid with squared blocks on the exterior faces. At short intervals headers were used, running through the wall. The masonry was laid in courses, but the courses do not run uniformly along the wall. In Pl. 3 a x the southern part of the east wall of this house is given, showing the walled-up door to 36, with its two sills and the mouths of the two conduits from rooms 35 and 36. The antæ and door-jambs were always made of dressed stones well fitted, and with joints broken. Mud mortar was used throughout. The walls were built upon foundations of rough masonry, in which large and small stones from the earlier buildings were used indiscriminately (Fig. 62 e e and Fig. 63 i). These foundations were never over 1 m. in depth, and rested either on debris, as at q, or on the remains of earlier walls, as at f (Fig. 62). Along the eastern exterior wall even the foundation was of squared stones, as in the superstructure.

Over the face of the wall a coating of rough gray plaster was spread, and this was deeply scratched with zigzag lines, to give a hold for a thin final coat of stucco. This stucco covered the columns and details as well. Most of the first heavy coat of plastering had scaled off, and none of the finished coat was *in situ*, but from the debris came a number of fragments of colored stucco with paneling in red, white, purple, and yellow, and some with speckled and lined effects to represent stone and marble.

*Drainage* — Just north of the main entrance to House A a large drain was built through the wall of the house. This turned south down the centre of the street. Its source was destroyed by the Roman walls, but apparently it either drained the large court or was the outlet of a bathroom adjoining the entrance vestibule. It was 28 cm. wide and 25 cm. deep (Fig. 60 d). The sides were formed of small stones set on edge, and the top of flat slabs, m. One of the side stones towards the house had a small square opening, as if intended to connect it with another drain coming from the house, but no trace of any such connection was found. As it emerged from the wall, the drain had a steep slope, but for the rest of its course southward it conformed to the slope of the street. There was another small conduit (Figs. 59 and 61) extending from the curb of portico 26 obliquely towards and under the sill of the door in the southeast corner (Pl. 6 d +). This must have belonged to the earliest occupation of the house, as the inlet below the curb was closed. Originally this conduit, after running under the sill of the door into 35, turned towards the east and ran through the outer wall into the street. The outlet still remained, 41 cm. below the level of the court, but that part of the conduit which was below the floor of 35 had been removed, and a new, rougher channel had been made, connecting with cistern 14 in the inner court



67. Section through cistern 14, in room 45.  
Scale, 1:100.

45. Room 36 had a plastered floor which sloped down towards the southeast corner, where there was another outlet through the wall. (See Pl. 3 a.) During the first period the level of the cemented floor at this outlet was 42 cm. below the level of court 31. When the door sill was raised, a new layer of cement raised this outlet 35 cm.

The cistern in room 45 (No. 14) was one of the largest rock cisterns on the summit, and, as it was characteristic of them all, will be described here in detail. It had existed here previous to the erection of House A, as a conduit leading into it from the northwest, a fragment of which remained, had been broken by the foundation walls of A. The cistern was cut in the rock and was of the usual bottle type (Fig. 67 c). It was nearly circular in plan, being 6.29 m. by 6.61 m., the sides, of course, not being quite regular. Its bottom was 9.25 m. below the surface of the rock, which was here 2.68 m. below the surface of the pavement in room 45. The neck, b, of the

cistern was 95 cm. in diameter (section y). From the rock surface to the pavement slabs of the court the shaft, a, was circular, 90 cm. in diameter

and lined with masonry. The stones, l l, forming the sides, were laid radially, but not cut to fit except at the inner edges (Fig. 67, section x). The intervening spaces were filled with smaller stones. This part of the shaft extended through the debris, d d, below the floor of the house. The entire inner surface of the cistern up to the top pavement was lined with gray cement, e. The pavement, p p, was 28 cm. thick, and laid as shown on the plan of the house (Fig. 59). The portion around the top of the cistern consisted of two larger slabs, in each of which a half-circle was cut, 35 cm. in diameter, to form the mouth, m. The edges were slightly worn into grooves by ropes. Probably there was a stone cover for the opening when the cistern was not being used. Cistern No. 12 was of the same type, 3.98 m. in diameter at the base, and 5.26 m. deep below the surface of the rock. Its masonry shaft was 45 cm. square. Such cisterns formed the only water supply of the place, and the rain water of the winter months was conducted into them from the roofs and open courts of the houses.

*House B* — This house, owing to its being on the line of both inner and outer west walls and north walls of the temple, was badly cut up, and its plan was not easily distinguished. It was, however, of the same character as House A. Its level was, as has been said, 1.07 m. below that of the latter, with the entrance on the west side.

No. 40 was the court, with a level of 438.8 m. This was paved with slabs of stone, of which only a small fragment remained. On the south side of this was a portico, 41, much larger than any of those in House A. It was 5.4 m. by 4.2 m. Its earth floor was 11 cm. below the floor of the court, and had the usual curb along its open front. The antæ at each side had elaborate bases, not so well cut as those in House A, and of quite a different character. The two bases themselves bear little resemblance to each other. That on the west side is given in Fig. 64 c, and that on the east in Fig. 64 d. Only the bases of the two antæ were *in situ*. Between them must have been a column, but this had been swept away by the wall which cut through the centre of the portico. At a distance of 3.14 cm. north from the edge of the curb was a step, the pavement beyond being 8 cm. below the rest of the court. Unfortunately, no rooms were preserved in connection with the court, so that we cannot tell anything about the plan. But from the northeast corner of the court, or from a room immediately adjoining it, a narrow flight of steps (54) ran towards the north. This was 75 cm. wide, and was separated from the room (55) to the west of it by a thin wall of stones, which probably was only a low balustrade along the side of the room, to prevent accidents. The steps descended to a horizontal passage, which passed under the floor of shop 63, and part way out under Street Beta, ending at a large rock cistern with a shaft of masonry extending to the level of the passage (Plan 3, section A-B). The passage was roofed with slabs, which extended also out over the cistern. The slabs formed part of the floor of the shop (Pl. 20 a 8), and the cistern was part of the water supply for House B. Of the rest of this end of the house we

found only one corner of room 55, which had an earth floor 29 cm. above the level of the court.

To the south of the portico 41 were a number of isolated bits of walls belonging to rooms 42 and 43. The floor-level of the latter was 1.24 m. below the level of court 40. There was no clue to the division between the Houses B and D, though, as the south wall of A was in line with a wall here, the latter may have been the south limit of B. Just west of 43 at a later period a small square bath (59) with steps was built. The cistern was 1.4 m. by 1.7 m., and a flight of four steps led down into it. The walls and steps were built of small rough rubble, and coated with gray cement. Like House A, this house had two cisterns, the second being No. 15, near the western side of the building, opposite room 42. This lay directly beneath the Roman walls, and had been filled up solidly with large blocks of stone to afford a sure footing for the temple walls.

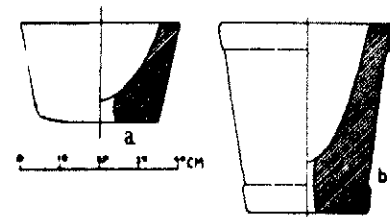
*House C* — Of this house very little remained. The division wall between it and A was quite clear, as was also the beginning of the cross walls dividing the north end of the house into rooms. Room 38 was 2.1 m. by 3.9 m., and room 62, which adjoined it on the south, was 3.9 m. wide. No. 51 seems to have been a large room, 3.5 m. wide, and extending beyond the limits of the rooms on either side of it. In the northwest corner was 47, with enough of the walls preserved to show the complete plan. It was 3.2 m. square. The floor was 1.12 m. below the court 31 of House A, and the north and west walls rested on the thicker walls of an earlier structure. The rest of the house had been cut to pieces by the south wall of the temple and by the walls of the apsidal building in the rear of it. Owing to the gradual slope of the street, the level of the rooms in this house was below the level of those of A. There were two cisterns, as in the other houses. The main one of these was No. 10, near the southeast corner of the house. It had been later used as the cistern for the tower which was built here in Arab times. The other (No. 17) was to the north of this, on the east side of the house, apparently opening into room 62.

*House D* — This house, the most completely ruined of the group, was represented by only a few scattered walls, part of a plastered tank or bath at the south, and the cistern. At the north end were the walls of two rooms, 44 and 61. In the latter was the cistern, No. 14, which was the second largest of the group. It was bottle-shaped, and 4.5 m. in diameter. The inner west Herodian wall had cut through the centre of this shaft and left the half of it remaining *in situ*. The top was 3.5 m. above the surface of the rock. The sides of the shaft above the rock were lined with stone 18 cm. thick, and the shaft itself was ca. 75 cm. square, and placed diagonally to the walls of the house. At the south end of the house, just inside the great terrace wall, was a reservoir 1.35 m. by 5 m. It was sunk in the debris below the floor of the house, the sides of the excavation being first lined with rough rubble masonry, and then coated with a thick layer of gray plaster. To the west of the temple walls another small portion of this house was found. This was part of the court 201. It was paved, and its level was 437.06 m., i.e., 1.81 m. below the court of House A, and 74 cm.



below that of House B (Pl. 32 a 8). On the west and the north side were the traces of a curbing, 10 cm. high on the north and 18 cm. on the west, the fragment being the corner of the court (Pl. 32 a 8). At the angle was the lower part of a column, 46 cm. in diameter. This court must, therefore, have had a continuous colonnade, like that of House A or that of the later Roman house west of it, and not a series of porticos. The base of the column, though much weathered, was similar to that in the portico of House A. The floor of the colonnade was of beaten earth, 3 cm. above the paved court. Below the west floor was a plastered conduit of stone, like that under porch 26 in House A, curving towards the southwest. Adjoining the court on the north was a small basin, 1.45 m. square. This was sunk 72 cm. below the floor of the court, and its walls of small rubble were coated with the usual gray cement. From its southwest corner led a channel, the bottom of which was 75 cm. above the bottom of the basin, and on a level with the earth floor of the colonnade. The channel made an S-shaped curve, passed under the west wall of the house, and emptied into a small catch-pool just outside the wall. This pool was slightly wider than the conduit, and 20 cm. deeper. From the west came the large stone drain which was under the street south of the Atrium House, and emptied into this same catch-pool. The stone drain, however, was Herodian. Apparently by accident, it utilized part of an older drainage system. In the debris of these rooms were found several fragments of painted stucco. One was painted red, and had regular V-shaped grooves, to imitate rusticated stonework. Another fragment was a deep green. The anta base in e (Fig. 64) was found in the debris towards the northeast corner of this house.

From the debris in House A came fragments of pilaster capitals and other details. Two broken sockets (or presses) of limestone were also found in this debris. One of these (a, Fig. 68) was plain and shallow, and had a worn opening in the bottom. The other (b) was larger, and had a rim around top and base and an opening in the bottom.



68. Stone mills, from debris over House A. Scale, 1:20.

*Shops* — Of the six shops which originally existed along the north end of Insula IV, four had been preserved below the platform of the Roman temple (Fig. 59 and Pl. 20 a 8, b 8). The walls of these remained at some places to a height of over 2 m. Shop 63 was 3.54 m. by 3.6 m. The doorway, which was approximately in the middle of the north wall, was 1.47 m. wide, and had a recessed jamb for a double door. The outer part of the sill, in line with the offset of the jamb, was raised 6.5 cm. above the main sill. Below the east side of the room was the tunnel leading from House B to its cistern under the street, and the roofing slabs of this tunnel formed part of the floor of the shop. The rest of the floor was covered with polygonal stones, resembling those found in the glacis at the west gate and in the pavement in the terrace south of the summit. From the centre of the east wall a fragment of wall 25 cm. thick projected 1.2 m. into the shop, and divided this side of it into two recesses. In the north-

west corner was a space of irregular shape, ca. 1.25 m. across, enclosed with a row of rough stones. In this was a large round *tannûr*, or oven, of coarse brown pottery. Only the bottom of this was *in situ*, and in it lay fragments of two large water jars with shoulder handles, and a small two-handled cooking pot of ribbed, purplish ware. The side wall of this shop was of squared stones laid in regular courses as alternate headers and stretchers (see Pl. 20 a 8). The outer wall, though of squared stones, was not so regularly laid, and apparently had been rebuilt at a later period.

The next shop to the east, 66, was 3.62 m. by 4.2 m. Its door was 1.8 m. wide, and constructed like that in 64. Its walls were in the main of rougher stones. But at the door and in the wall dividing this room from 64 the stones were dressed and fitted as in the latter room. Shops 67 and 68 were similar in all respects to 66, both having wide doors opening on the street, but while 67 was of the same width, 68 was only 2.96 m. wide. The south wall of rooms 66-68 was almost entirely destroyed by the fine Herodian wall, but enough of the foundations were left to show its position. The southwest corner of 68 had a feature not found in any of the others. Instead of a sharp angle the two walls joined in a wide curve, which had a heavy coat of white lime plaster. The southeast corner of the room may have been similarly curved, but it was not preserved. Only one corner of shop 65, west of 64, was preserved, the rest of it being in the line of the heavy west wall of the Severan portico. To the west of the Roman wall, the north wall of the shops continued to the corner, and where the superstructure was preserved the sill of another wide doorway was *in situ*, belonging to a shop (Plan 7 No. 773) adjoining 65. Below the floors of these shops were fragments of heavier walls of greater thickness and different masonry, belonging to the Post-Israelite period. At the points where these were crossed by the walls of the Hellenistic buildings they had been used as foundations.

#### e. INSULA V

Insula V (in JK 9-13) lay to the east of the temple, and, as the east wall of the latter cut through the middle of Street Gamma, the area was left undisturbed by the extensive temple foundations. It seems evident also that during the Herodian or first Roman period, no buildings were erected at this side of the temple, although the Preherodian houses (Insula V itself) seem to have been terraced away. When, during the later period, a bath-house was built here, the foundations of the earlier Hellenistic period were largely utilized. The depth of debris was less than anywhere else on the summit, and, owing to this shallowness, only the lower portions of the foundations were left standing (Pl. 2 a). At the northern end of the area were foundations of a group of rooms, Nos. 12, 14, and 15. The walls were characteristic of the Preherodian period, having large tie-stones running through them at intervals. Belonging to this group was the small cistern, No. 5, near the corner of the temple. Of the conduit which led to this cistern, a small fragment remained. To the southwest were two other rooms, 18 and 19, the walls of which formed a sort of recess from the street. Near the cor-

ner of this recess, outside the wall of room 18, began a conduit. This was built of blocks hollowed out on top, and covered with slabs, like the conduits in Insulæ II and III. After following the wall for several metres, this turned out to join the conduit coming from House A on the opposite side of the street. Its connection with that conduit, however, was broken by the Roman wall.

The remainder of the strip (S1) was occupied by a series of earlier buildings with walls 1 m. to 1.3 m. thick, which had been used throughout this period as foundations for houses, and still later for the Roman bath-house. The building at the southern end of the strip had only the northern wall and the northern portions of the eastern and the western wall *in situ*. All the southern part had been destroyed. The original building had been 16 m. in width from east to west, but had been enlarged on the east and the north, and an irregular tower, the opposite sides of which were neither equal nor parallel, had been erected at its northwest corner. In the middle of the strip were similar walls, belonging to a building the plan of which was clear, although our excavation toward the east was not completed. On these walls had been erected a house belonging to the insula period. The west wall of this house was built out in line with the street. In room 26 was a cistern, No. 9, built up above the rock surface, with the usual square shaft of slabs set on edge. In room 24 were two *tannûrs* at different depths, marking approximately the floor-levels of two periods of occupation. One of these (1) was 1 m. below the street (Gamma), and was the level of the floor of the east house (Hellenistic), and the other (2), near the west wall, was 75 cm. lower. In the northwest corner of the adjoining room (25) was another *tannûr* (3) at the same depth as the second in room 24, and these two marked the level of the early thick-walled house. These large walls were well built, and resembled the foundations of the buildings inside the Greek Fort Wall more than they did those of the insula town (Pl. 2 b 7). The tops of the walls were in every case below the level of the street, and the walls of the tower erected against the southern building extended inside the limits of the later insula. It is obvious, therefore, that the thick walls represented a series of buildings erected before the summit was laid out in insulæ.

Judging from its position and size, this thick-walled building must have been of considerable importance. From the debris in its vicinity came several fluted drums of Doric columns, and built into one of the walls of the late Roman bath was a large Doric capital. The flutes on the drums were well cut, with a fine arris. These and the number of fine Doric capitals found built into the walls along the west side of the summit were evidence that some large public building had existed on the summit, as all these details were of large size and entirely out of scale with any of the dwellings uncovered. It appeared probable that the walls found in this strip were the foundations of the building in which these architectural details had been used. If this had originally been a temple, its face would have been towards the east, so that the walls we have would represent only part of the north and rear walls. Unfortunately, the portion remaining was insufficient to determine this.

Several cisterns were found in this insula. Some of these were used only in the early period, and covered over during the later, while others continued to be used down into the Roman period. They do not present features differing from those of the cisterns already described under the other insulæ.

#### f. INSULA VI

Insula VI (in CE 11-13) was south of Insula III, and separated from it by the narrow slanting street. On the east it was bounded by Street Alpha, and extended thence to Eta, along the western edge of the summit platform, and to the south wall (Greek Fort Wall). On the north one small group of rooms was found *in situ*. The floor of these rooms, as established by several doors still *in situ*, was from 75 cm. to 90 cm. below that of the court of the Roman house (Pl. 34 b 8). Room 712 seemed to be a large court from which opened two small rooms on the east, 713 and 711. The east end of the latter had been carelessly rebuilt at some subsequent period in the occupation of the house, and the new walls at the northeast corner did not line up with the older walls. From the west of 712 a door opened to a room of which only a portion of the west wall remained. This, however, was also of later construction. In the final Preherodian period the floor was raised nearly to the level of the subsequent Herodian house, the old walls becoming the foundations of the new building in the eastern part, while the rooms were slightly altered in plan in the western side; but of these reconstructions very little remained. To this final period belonged the conduit which led from the northeast corner of 711 towards the southeast, emptying into S7 cistern No. 1. The conduit was made of rectangular blocks of stone, cut with a deep channel on the top, and laid end to end. It was covered with flat slabs, like those in the southeast corner of Insula III. In the southern part of the house was another group of rooms, built largely on the foundations of the Ostraca House, the rooms being, in size and shape, similar to those of the latter. The floor-levels of the first houses were ca. 1.5 m. above the level of the Ostraca House. Very little filling-in had been done, as the surface of decay of the Ostraca House was left undisturbed. Where the new walls did not coincide with those below, the foundations rarely cut through this surface of decay, but generally rested immediately upon it. Here, as elsewhere, were found walls and earth floors of a second period, 30 to 40 cm. above the first. All these walls were of rough rubble, and were foundations only. The entire superstructure had been swept away when the Atrium House was erected over them, with its floor-level but a few centimetres above the floor of the last house. In the southwest corner of this insula only a few scattered walls and sections of conduits were *in situ*. At the lower end of the west street was a fragment of wall with two doors, inside of which were several steps of a flight leading to the street-level. The houses of which these room were a part belonged to an insula west of the line of the street along this side. Apparently, therefore, they were built upon the foundation of the great enclosing wall, which was manifestly not used as a Fort Wall in the Preherodian or insula period.

## 2. THE LOWER TERRACE QUARTER OF THE PREHERODIAN TOWN

Only a small area of the lower quarter of the Preherodian town has been excavated. In the season of 1908 a number of walls belonging to this part of the town (or to a later Roman town) were uncovered in a trial trench, designated as E, on the terrace immediately below and to the west of the summit. In the following year a strip, called the Lower Terrace (L. T.), in line with Insula IV, was cleared down to the edge of the cliff which marked the southern boundary of the town. This area was traversed by a long street, Lambda, neither end of which was reached by us, although we followed it through S3 and S5 for 36 m. beyond the west side of the main excavation of the Lower Terrace. Here it disappeared under the edge of the S5 excavation. On the east it had been broken by the Roman terracing. Throughout the part excavated, its magnetic bearing was  $12^{\circ} 15'$  north of west, but just eastward of the eastern edge of the Lower Terrace, where it was cut by the later walls, it must have made a slight turn north of east to conform to the contour of the hill. All the walls in connection with it on the west (i.e., in L. T.) were perpendicular to it, while all those remaining on the east (i.e., in S1) had a different orientation.

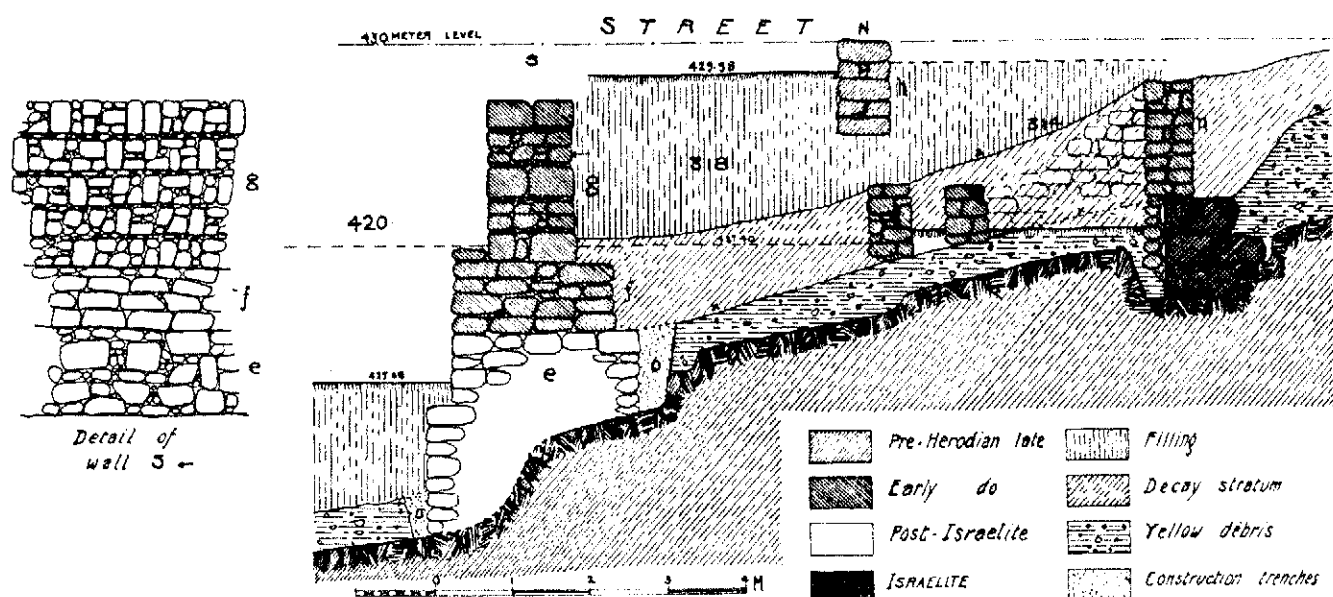
While the upper quarter of the last Preherodian town was constructed on a surface nearly level, slightly terraced to avoid excessive filling-in, the lower quarter was built on a slope, so that a system of higher terraces was necessary. The level of Street Lambda at its western end was 429.48 m., or 9 m. below Street Gamma, opposite the entrance to House A, Insula IV. The floors of the houses near the edge of the cliff were from 12.5 m. to 13 m. below this. The houses were much less pretentious than those of the upper quarter, and not so well built. The area excavated below Street Lambda was perhaps too small to show the street system which divided the lower houses into groups, while the high terrace bearing the Preherodian houses north of the street has practically disappeared, owing to later constructions and to weathering. Nevertheless, for the sake of convenience in reference, the area between the Greek Fort Wall and Street Lambda has been designated Insula VII, and that south of the street Insula VIII.

## a. INSULA VII

The part of the lower quarter called Insula VII (BH 15-16), so far as it was uncovered, had been largely destroyed by the walls of the great Roman apsidal building and the enclosing walls of the temple area (Pl. 25 a 7, 8). The corner of the apsidal building projected over the north line of Street Lambda, and the only remains of any of the houses of the insula period was a short length of wall preserved between the walls of the southwest room of the apsidal building (in F 15).

The remaining walls in this part of the site belonged to periods earlier than the last Preherodian. To the west, near the southwest corner of the Ahab palace,

The rooms in Insula VII were not sufficiently well preserved to furnish the clue to the plan of any house. It is obvious that only those walls which could be utilized as foundations for the new series of houses had been left undisturbed, the



69. Section through west end of Street Lambda. Scale, 1:100.

others being destroyed for their materials. Room 314 was 1.82 m. wide and 2.69 m. long, and at its northwest corner was built partly over the remaining courses of the Ahab wall (Fig. 69 n and Pl. 25 b 7). The floor was 2 m. below the latest street-level, and was of hard-packed earth. In the northeast corner were three jars (see p. 285, on Pottery, Babylonio-Grecian, I, Nos. 5, 6, 7). At the east end was a door 90 cm. wide, leading into room 316. Of this room only the wall dividing it from the last room and a part of the north wall were *in situ*. All these were of rough rubble, and had the character of foundation walls of the period, and may, therefore, have been partly rebuilt to form cellars for the later houses. Near the corner of the apsidal building were several fragments of foundation walls and part of a conduit, the bottom of which was 14 cm. below the level of room 314. Between the two walls of the street were rooms 317 and 318. The former was 3 m. long, and its cross walls were of rough rubble. Room 318, though its east wall was missing, was on the whole better preserved, and gave a better idea of the construction of the street walls (Fig. 69, elevation of masonry at left of section). The north wall of the street, h, was only 1.2 m. deep, resting on debris over the room walls below. It was built of flat, square slabs laid as headers and stretchers, of which five courses were still *in*

*situ*. The south wall was more complicated, and represented several periods of reconstruction. The lowest part, e (Fig. 69), was built upon the surface of the rock. It was 1.15 m. high, and built of large blocks laid as stretchers on edge and as headers, with small stones filled in between them. The second period was represented by the wall f, resting on e, but with its face set back ca. 30 cm. from that of the latter. This wall was 78 cm. high and contained four courses of flat stones laid as shown. The third wall, g, was set back 50 cm. from the face of f, and was 2.17 m. high, built in courses of rubble, with headers running in at intervals as ties. Between the successive courses was a narrow row of small stones, the general appearance of the wall being like that of the Greek Fort Wall, but on a smaller scale.

#### b. INSULA VIII

Adjoining the south side of the street Lambda the house walls of Insula VIII (in L. T.) were well preserved, but to the south of these walls, except for a series of rooms along the edge of the cliff, the houses were completely destroyed by the Roman terracing. Parts of three houses were uncovered along the street, of which House C was nearly complete (Pl. 16 a). The levels of these houses were ca. 5 m. below the Preherodian street-level, and in the case of C a portion of one of the flights of steps by which they were reached was found.

*House A* — The eastern part of this house had been destroyed by the angle of the later terrace wall, and its southern part by the foundations of the Roman bath. At a point which must have been about the middle of the front on the street was a passage (43), 1.5 m. wide and 5.25 m. long, which may have been the entrance. Its inner end was ca. 2 m. below the street, and it may have contained a flight of steps leading up to the street. At the lower end was a small pier dividing the passage. Here doors led to rooms on the right and the left. That on the west had a sill 2 m. below the street, and led into room 44. This room was 3.35 m. by 4.7 m., and the floor had been destroyed, but 2.83 m. below the sill level was another floor of beaten earth, 40 cm. above the rock surface. This floor, with the walls and floors in its vicinity, belonged to an earlier series of buildings, erected before the street was cut through, just as in Insula VII. Passage 43 opened into a large space (41), which probably was the court of the last house. The width of this space was at least 3.5 m., and it had an earthen floor, 86 cm. below the door of room 44. On the west side a door 85 cm. wide opened into room 40. This was a narrow chamber, only 1.3 m. wide, and with probably the same length as the court. The sill of the door was 37 cm. above the court floor, and 8 cm. above the floor of the room. Below both court and room was another earth floor, corresponding to that under 44. Under the court (41) this earth floor was 14 cm. lower than that under 44; and in 40, on a level with that under 44. The walls of the upper series were *in situ* to a height ranging from 10 cm. to 75 cm. above the floor-level. The north wall of 40 was built on a rubble foundation extending 1.3 m. below the floor and rest-

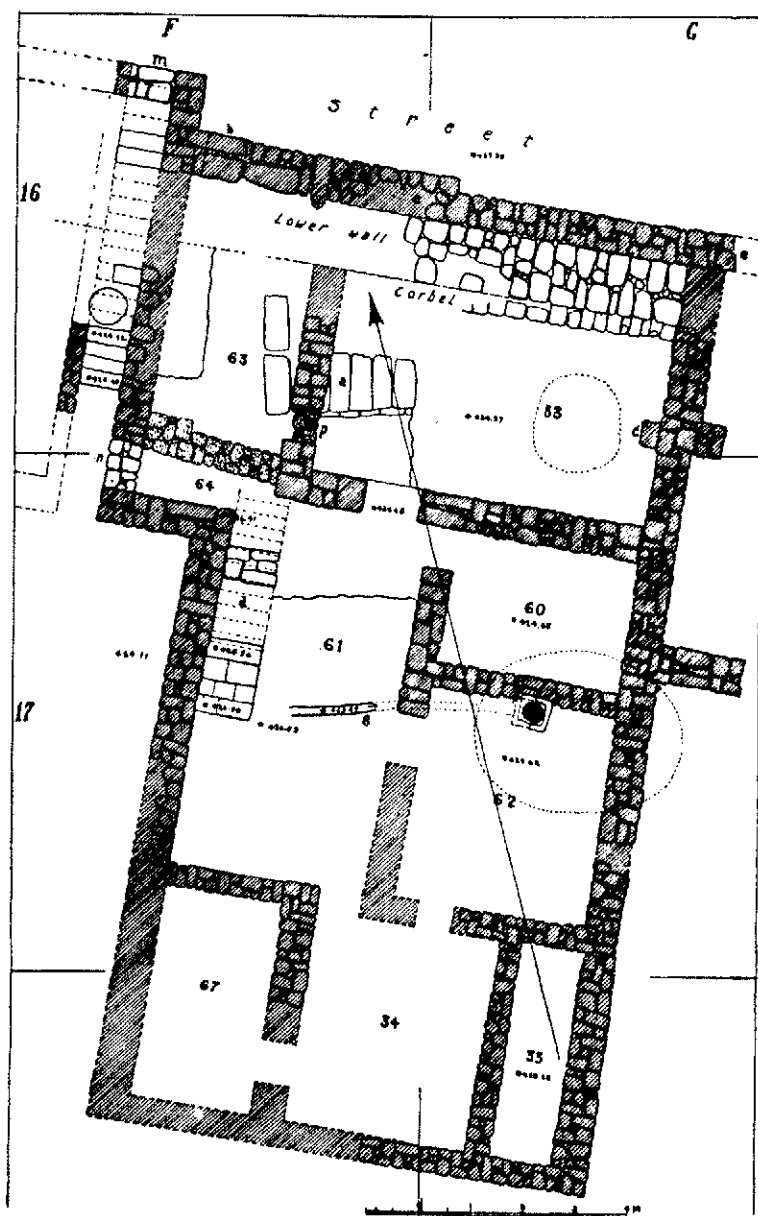


ing on a bed of small stones 55 cm. deep. The east wall, only 70 cm. deep, also rested on a bed of small stones, which here contained numerous potsherds. On the west the foundation rested partly on the top of the wall of the lower series of rooms. Near the rock surface were fragments of walls belonging to the previous building, but only one or two courses remained *in situ*. They usually were separated from the rock by a layer of debris 9 cm. to 19 cm. in thickness.

*House B*—The walls of House B were intact from the side of the street to the Roman terrace wall. Along the north were three rooms, the floors of which were 1.87 m. below the street. Room 51 was 2.9 m. by 3.5 m., but only a small part of its east wall remained. The next room (47) was 2.1 m. by 2.9 m., and on the east was one jamb of a door leading to 45, which was 2.2 m. by 2.9 m. The south wall of these rooms ran through unbroken, and was *in situ* 70 cm. to 1 m. above the floor, and there was no opening into the rooms to the south. It would appear, therefore, that they were shops opening on the street like those along Street Beta. The other rooms presented no additional features to those of House

A. Below them all were the walls of the first period, with traces of the earlier earth floors still *in situ*.

*House C*—This was the best preserved house (FG 16–18) in the lower quarter, and, as A in Insula IV could be taken as the type of the better class of houses, C in Insula VIII was an equally good example of the smaller houses. Although its south end was cut through by the later terrace wall, the foundation walls appeared again south of this, so that little of the plan was missing (Fig. 70). The house was 9.7 m. wide and 18 m. long, and rectangular in plan. On the west side was a projection of 1.85 m., where the house fitted into the adjoining one. The level of the court was 5 m. below the street, and was reached by a flight of steps from the outer door, m, which it shared with the next house. These were built against



70. Plan of House C, Insula VIII (restored). Scale, 1:150.

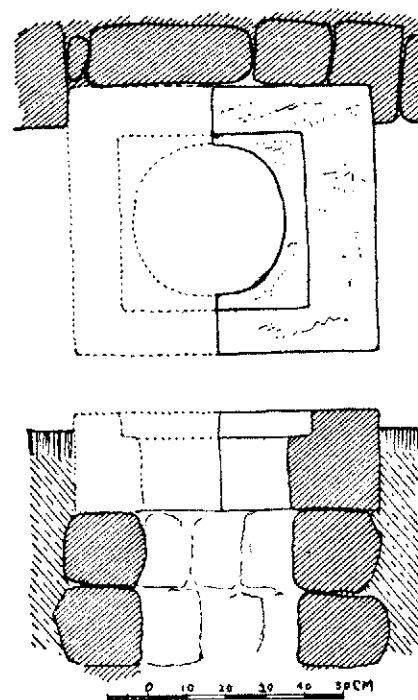
the west wall, and consisted of a straight, steep series beginning at the street



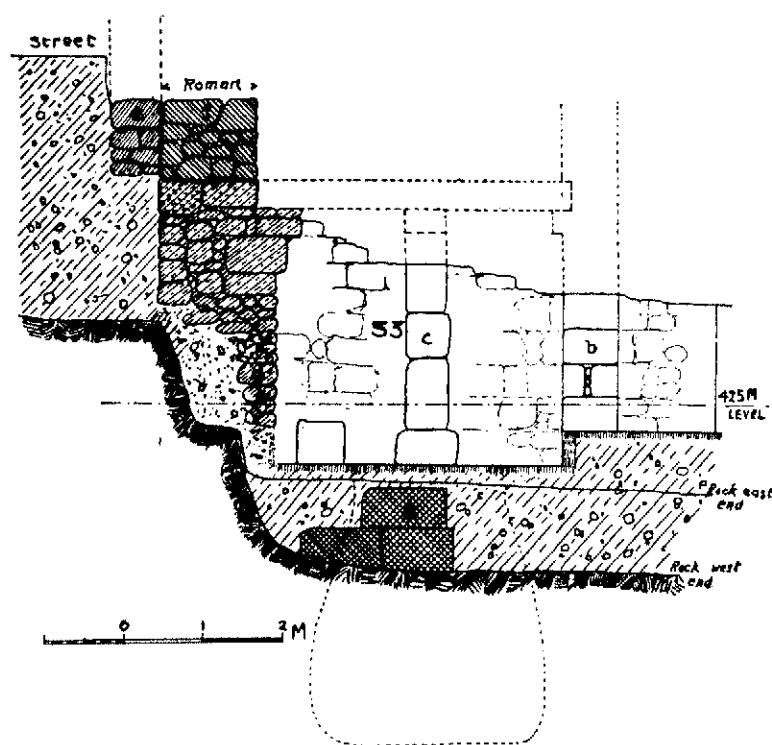
wall and ending near the end of the offset. The entrance to House C was at the foot of these, at n. Originally the door had opened on to a single large room (63), which in turn connected with the court of the house (Pl. 14 c). But later this room had been shut off by a slanting wall of rough masonry, forming the passage 64. The court (61) was 3.75 m. by 7.25 m., occupying about half the width of the house.

On the east side of this court were two doors, one opening into room 60, and the other into room 62. The latter was 3.5 m. by 4.05 m., and its floor was about level with the court. On the north side of this room, and partly built into a shallow niche, was the mouth of a cistern. The curbing was 5 cm. above the floor, and was made of two slabs (Fig. 71), recessed to receive a cover of wood or stone, and cut with a circular opening. The shaft was 54 cm. in diameter, and built of masonry down to the rock, 1.35 m. below. The cistern was bottle-shaped, 2.05 m. by 3.85 m. wide, and 7.4 m. deep below the edge of the curb. On the south side of the court were three rooms, of which only the foundations were *in situ*. North of the court was the main room (53). It was 3.9 m. by 6.45 m., and its floor was 41 cm.

below that of the court. Its north wall was the earlier terrace wall, d (Fig. 72), in continuation of that shown in Fig. 69, here, however, not extending to rock,



71. Curb of cistern in room 62.  
Scale, 1 : 20.

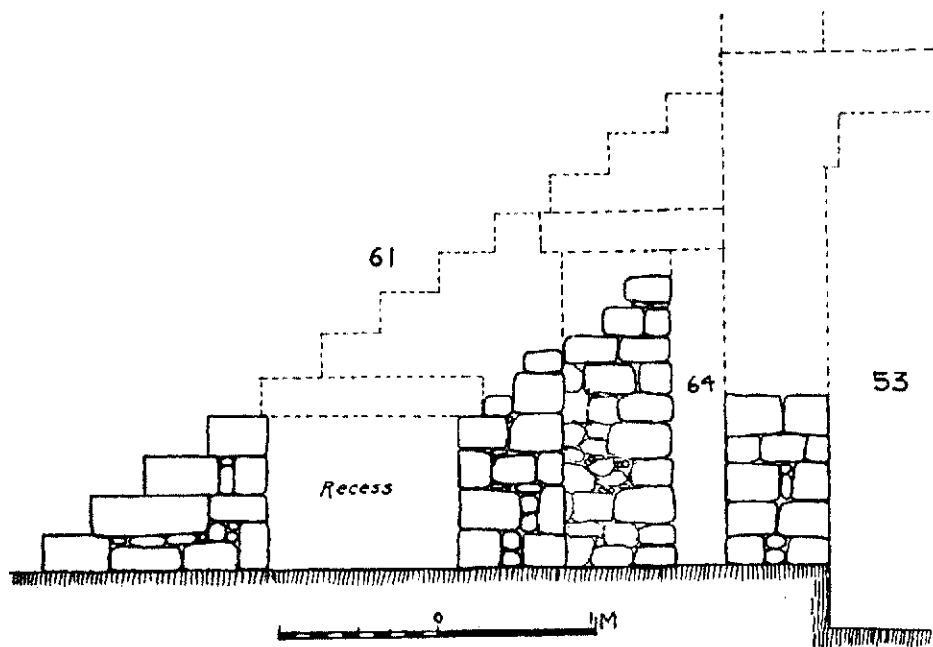


72. Section through room 53, with street wall. Scale, 1 : 100.

and more unevenly built. In the middle of the east wall was a pilaster, c (Fig. 72), intended to carry the end of a transverse beam for the ceiling. Along the north wall, at a height of 2.9 m. above the floor, the masonry was corbeled out, to carry the cross beams. The top of this corbel was 3.25 m., and this represented the height of the room. Below the floor was an old cistern, which had been filled in and covered over during this period. On the western side, a door led into room 63, which, as already stated, had been shut off from the entrance. This door

(Fig. 70) had afterwards been blocked up, and the room abandoned. The western wall of this room was a rough rock-scarp, evidently made for the lower end of

the Ahab tower, of which the remains of the masonry, a (Fig. 72), were found below the floors of this and the adjoining rooms. On the west side of the



73. Elevation of steps in court 61. Scale, 1:50.

court was the beginning of a flight of steps (Pl. 14 c +). Each step (Fig. 73) was laid either with single blocks 1.05 m. long, or with two or three flat blocks. The first four steps rested on solid masonry. Then there was an open space, 1.25 m. wide, with a wall 60 cm. thick beyond it. This space had probably been covered with

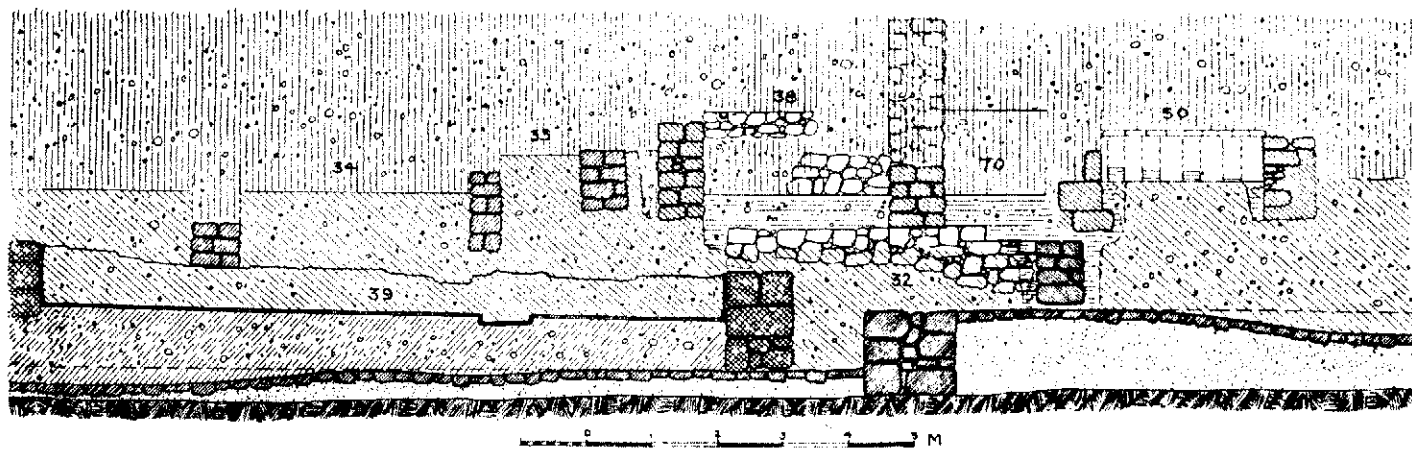
slabs or beams, and the steps continued above it and over the passage from the entrance. This flight of steps led to several rooms built over 53 and 63. These were 1.5 m. below the street, and overlooked the interior court of the house. They were larger than those on the lower floor, for the outer wall on this level was built beyond the earlier heavy wall, as shown by the shaded wall on the plan (Fig. 70).

Only the entrance steps of the next house and the beginning of its walls were cleared. As has been stated, the same stairway served for both houses, the passage in line with it continuing straight into the court 17 (Fig. 70) of the next house. At the upper end of the stairway was evidence of a change in the level of the street. The south wall of the street had evidently run through in its first period. When the level had been raised by accumulations of debris, the stairway fell short of it, and several additional steps had to be built, projecting into the street to reach the new level.

*Other Houses* — South of the three houses just described no trace remained of any similar structures, except near the edge of the cliff. The walls of House C were the only walls traceable south of the long terrace wall, which had cut through and destroyed the lower ends of Houses A and B. Over these was the Roman bath-house, while the east side of the rest of the lower terrace had been entirely altered by the deep recess in the terrace wall. At some time during the Babylonio-Grecian period, the greater part of the south slope had been an open area paved with polygonal stones (Fig. 74), similar to those used in the glacis at the western gate (Pl. 15 a 7, 7). Near the centre the pavement was divided by a wall 1.35 m. thick. East of this wall the pavement had a level of 422.85 m., and west of it 421.63 m. to 421.93 m., or from 94 cm. to 1.22 m. lower, but both sides varied somewhat from these figures, owing to the rough and undu-

lating surface, caused by pressure and by masses of masonry falling upon it (Pl. 13 c 7). The pavement had also a slight slope downwards from north to south. The western portion was from 10 cm. to 30 cm. above the rock, and the eastern from 60 cm. to 100 cm. above it, the space below being filled with debris. The division wall was carried down to rock, and was built of large blocks, well bonded together. It seemed to turn towards the east near the line of the later lower terrace, and it formed the southern side of the pavement at this end, while the western part continued a distance of 15 m. farther towards the south to an edge of rock, beyond which the house walls along the cliff were *in situ*. Towards the west the pavement extended beyond the limit of the L. T. excavation; and towards the east it extended to where it was broken by the Roman terrace wall.

Above the western part of the rubble pavement was a large, plastered chamber (39), the walls of which were parallel to the wall separating the two parts of the pavement. This chamber was 10.35 m. long, but its width could not be ascertained, because the southern side had been destroyed. Its walls were of large stones laid on debris. The western wall extended only 30 cm. below the floor-level, and the northern 39 cm. The east wall rested upon the pavement. The level of this room was 422.86 m. at its western end, and it sloped down at the



74. Section through strata, showing pavement, cemented room, and subsequent levels (F-H 18). Babylonio-Grecian terrace and pavement, shown by close shading; filling below it, dotted; cemented room, cross-hatched; insula house walls, broken shading; Roman walls, light shading; various debris fillings, light vertical shading, with loose stones. Scale, 1:100.

east to 23 cm. below this. It was 1.23 m. above the pavement and 1.76 m. below the court of House C. Its sides were coated with two layers of gray cement, and at the eastern end patches of this were still *in situ* on the floor. Here there was a *tannûr*, 80 cm. in diameter, the bottom of which was sunk 12 cm. below the pavement of the room. Below the large Roman room 20 to the east of this were similar walls of large stones orientated in the same way; but besides these there were no walls which could be assigned to this period, so that the significance of the various rooms and of the pavement was not clear.

The foundation walls of the houses along the south edge of the cliff were orientated like those of Houses A to C, and were, therefore, with the Street Lambda, laid out with reference to the contour of the hill (Pl. 12 a). Farther east, below

the level of the Roman terrace, were fragments of foundation walls of the same period, which had a different orientation, like those found in Insula V. This shows that at about the point where the large section of the Israelite city wall was uncovered the original contour of the hill, and accordingly the city boundary, made a decided turn.

The lower houses were very much broken up (FJ 19-20). On the east was a room (1) which had been built partly into a rock-scarp, and was evidently a cellar for a house above. Near the centre a square pier, composed of large blocks set upon edge, supported the ceiling. On the west two low steps led up to a door with rabbeted jambs, opening into room 2. This room formed with room 3 another large cellar. The two rooms were divided by a row of small, square piers, which carried the division wall of the rooms above. Along the east wall of room 3 were the remains of a flight of steps leading to the upper rooms. At the foot of the steps a door led to a room on the east. The walls of these cellars were of rough rubble masonry resting upon the rock. The piers and jambs were of squared blocks. To the southeast of these rooms were the foundations of other rooms belonging to the same group. In one of these was a cistern (L. T., No. 4), built like that in room 62 of House C, with a flat stone curb recessed for a cover. Along the south edge of the strip was the rock-scarp for the Israelite wall, and against this were remains of other walls. At the west was a room (8) belonging to another house. This was approximately on the same level as rooms 1 and 2. Along the north side was a narrow portico with two round columns, of which the lower part of one remained *in situ*. Behind this was a small cave (No. 1. See Pls. 13 a and 12 a + 1). The doorway was low, and several rude steps cut in the rock led down to it from the portico level. This doorway had been sealed up with masonry in one of the periods during which the house was occupied. Inside it were two mastabas of rough rubble (Pl. 13 a). Another cave (No. 2. See Pl. 12 a + 2) was just east of this, and contained a hard-packed earth floor. The rock all along this edge had been honeycombed with caves, the roofs of which, owing to the poor quality of the rock, had in several instances broken through (Pl. 12 a). Two other caves (Nos. 3 and 4), which had later been utilized for cisterns, were nearer the edge of the cliff and farther east than those just described (Pl. 12 a + 3 and + 4).

### 3. DETAILS

While the only details of this period found *in situ* were the column and the bases of antæ in the houses of Insula IV, which have been dealt with as parts of those houses, a number of other fragments and whole details were found scattered over the summit. Fortunately, a large number of these had been used again in walls of known date, and could thus be dated approximately themselves. The following catalogue includes all of those which from their position in the strata could be assigned to the Preherodian period, and also such others as closely resembled those thus assigned.

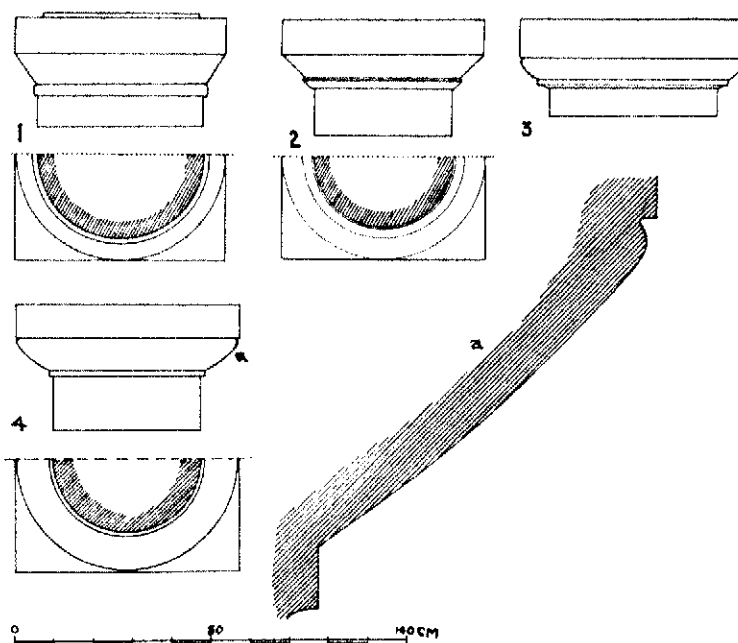
Group I. Doric capitals of simple form and crude workmanship, of late provincial type (Fig. 75).

1. Simplest example: square abacus, straight echinus, with slightly rounded (weathered?) fillet. Size<sup>1</sup>: w., 53.5 cm.; h., 28 cm.; d., 42 cm. Built into core of tower inside of west Greek Fort bastion.

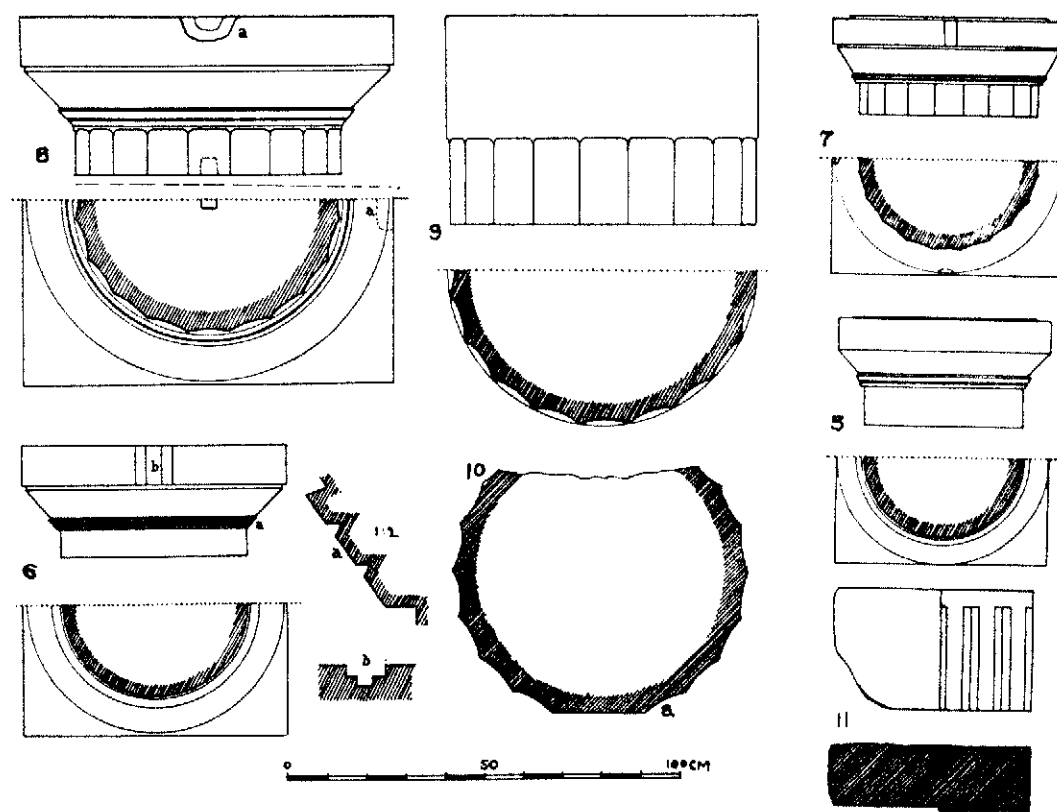
2. Do., with one wide annula (probably intended for two, but unfinished). W., 51 cm.; h., 29.5 cm.; d., 35 cm. From debris in Insula II, room 910.

3. Do., with curved echinus and beveled fillet. W., 51 cm.; h., 24.5 cm.; d., 42.5 cm. Built into foundations of south-west Herodian tower (over Greek Fort Wall).

4. Do., with simple fillet (half-size section, a, of echinus curve). W., 57 cm.; h., 32 cm.; d., 37.5 cm. From lowest part of Herodian foundations, south end of inner west wall.



75. Doric capitals of Preherodian period. Scale, 1:20.



76. Doric capitals and details, Preherodian period. Scale, 1:20.

5. Do., with two annulæ. Traces of deep orange stucco with specks of red. W., 54 cm.; h., 27 cm.; d., 40 cm. Built into core of tower inside west Greek Fort bastion (Fig. 76).
6. Do., with three annulæ, a (see half-size section). On one face of abacus a double recess, b. W., 67 cm.; h., 28 cm.; d., 47 cm. Built into core of tower inside west Greek Fort bastion.

<sup>1</sup>Dimensions are given thus: w. = width; h. = height; l. = length; D. = lower diameter of shaft; d. = upper diameter of shaft.

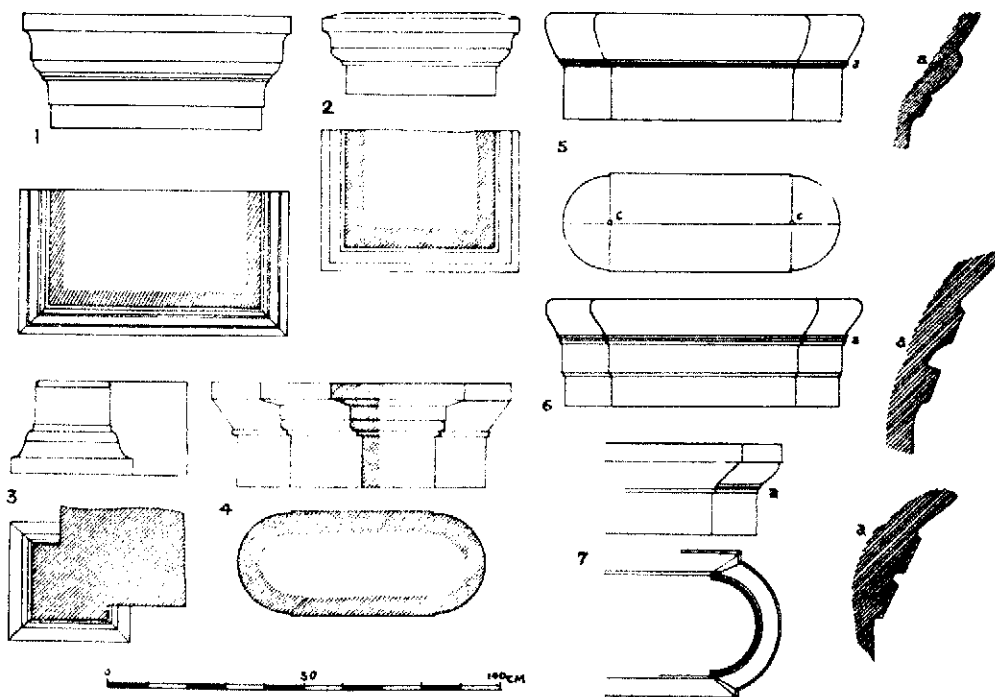
7. Do., similar to No. 5, but with 20 flutes running to lowest annula. In centre of three sides of abacus (fourth side broken), a vertical groove. Traces of deep orange stucco. W., 59 cm.; h., 25.7 cm.; d., 46 cm. Built into core of tower inside west Greek Fort bastion.
8. Large capital, with straight echinus and two wide annulæ; 20 flutes with rounded ends. Square dowels in top and base, and on one side of abacus a U-shaped groove for the lifting rope. W., 94.5 cm.; h., 40 cm.; d., 68 cm. Built into Roman tower inside northwest Greek Fort bastion.
9. Drum with 20 flutes, with rounded ends extending to within 31 cm. of one end of drum, this end being plain, and of the same diameter as the fluted portion. H., 53 cm.; d., 79 cm. Built into Roman tower inside northwest Greek Fort bastion.
10. Drum of 20 flutes. Two of these were dressed off, either to fit against a wall or to make the block flush with a wall into which it had been built. H., uncertain (drum broken); d., 75 cm. Built into Roman tower inside northwest Greek Fort Wall.  
A number of drums, both plain and fluted, were built into the northwest and west towers also. These were of various diameters, ranging from 40 cm. to 80 cm.

#### Group II. Doric entablature fragments (Fig. 76).

11. Fragment of frieze with triglyph. W., 51 cm.; h., 30.4 cm. From debris below vat with steps (No. 59) in House D, Insula IV.  
Another similar fragment was found built into the foundations of the Severan portico, and smaller fragments were found scattered in the debris at various places.

#### Group III. Capitals and bases of antæ (Fig. 77).

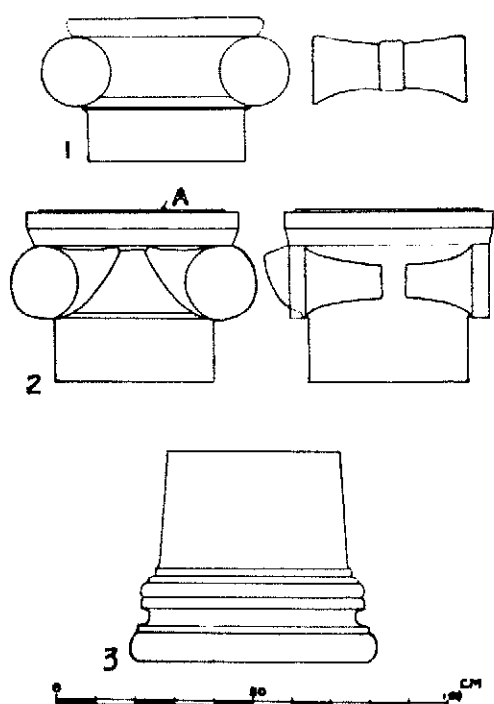
1. Capital of anta. W., 68.5 cm.; h., 28.5 cm.; top of pilaster, 53.5 cm. by 36.5 cm. Built into foundation of west wall of Herodian temple.
2. Do. W., 50 cm.; h., 20.5 cm.; top of pilaster, 38 cm. by 30 cm. From debris, north end of S9 (Insula II).
3. Base of small corner pilaster. Block, 34 cm. by 45 cm.; h., 23.5 cm. Face of pilaster, 18.7 cm. by 19.2 cm. From debris in L. T. Cave 2.



77. Capitals and bases of antæ, and capitals of piers, Preherodian period.  
Scale, 1:20.

Group IV. Capitals of piers (Fig. 77). The piers were all rectangular with engaged columns at each end, the capitals approximating the Doric capitals of Group I.

4. Capital with straight echinus and single fillet on rounded ends, and series of fasciæ and semi-rounds on straight portions. Top length, 76 cm.; size of shaft, 26.5 cm. by 63 cm.; h., 26.5 cm. From debris in north end of S10, ca. 50 cm. above rock.
  5. Capital, without abacus; curved echinus and two rounded annulæ (section, a), with greater projection on rounded ends. The base of the block still shows the construction lines. A line bisecting the rounded ends marks the axis, and lines passing through c c on the axis are guides for the cutting of the offsets. Top length, 81 cm.; shaft, 25 cm. by 70 cm.; h., 27 cm. From mass of masonry inside southwest Roman tower.
  6. Capital, with two annulæ (section, a) and fasciæ below, uniform on all sides. Top length, 80 cm.; height, 27.5 cm. From debris in house A, Insula IV.
  7. Capital. Broken fragment. Curved echinus with two annulæ on round ends (section, a); straight echinus with single fillet on straight sides. H., 23 cm. From debris in L. T. 14.
- A number of similar fragments of various sizes were found in the debris of S1, S2, S6, etc. Drums cut in the same shape for shafts of piers were found in S1 and S2.



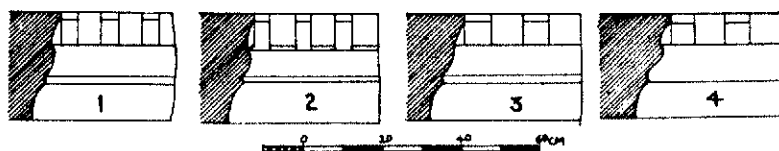
78. Ionic capitals and bases, Preherodian period. Scale, 1:20.

Group V. Ionic capitals and bases (Fig. 78). The capitals are very crude and conventional, and belong to the later part of the Preherodian period. Base No. 3 is possibly Roman.

1. Capital, with simple curved abacus: elementary volutes, being simply flat end of cushions with echinus projecting from them. W., 63.5 cm.; width by cushion, 39 cm. From Severan wall west of temple.
2. Capital, irregularly cut: abacus straight, with bevel; echinus cut away around end of volute. On top, a mason's mark, A. W., 63 cm.; h., 44 cm. From debris in L. T., room 25.
3. Attic base with lower part of shaft. Lower torus: D., 63.5 cm.; h., 54 cm.; upper d., 48 cm. From L. T., room 25.

Group VI. Cornices, lower members with dentils. Late period, possibly even Herodian (Fig. 79).

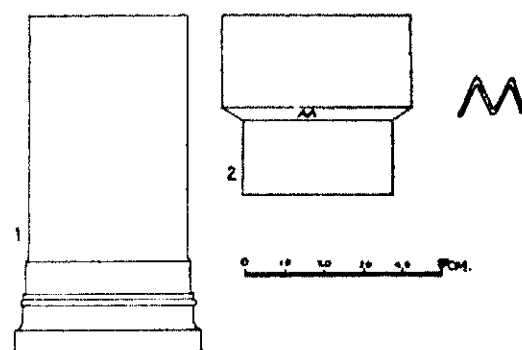
1. Cornice, regular dentils against slightly curved cavetto. H., 27.6 cm.; projection, 7 cm. From Roman foundation wall west of court (S11-23 W).
2. Cornice, with dentils beveled. Length, 41 cm.; h., 27.8 cm.; projection, 6.5 cm. From wall west of temple.
3. Cornice, with dentils against straight molding. Length, 48 cm.; h., 27 cm.; projection, 8.5 cm. From west wall of Severan temple.
4. Cornice, with cyma reversa below dentils. Length, 40+ cm.; h., 27 cm.; projection, 9 cm. From debris between west walls of Herodian temple.



79. Cornices. Scale, 1:20.

Group VII. Miscellaneous details, probably belonging to this period (Fig. 80).

1. Lower part of column with shallow base moldings. One side roughly chipped off. H., 85 cm.; d., 39.5 cm.; height of base, 23 cm. From debris below Roman bath-house in S1 (room 22).
2. Top (?) of column with circular plinth beveled to face of shaft. On one face of bevel, a mason's mark, M. H., 45.5 cm.; d., 38.5 cm.; diameter of plinth, 48 cm. From debris over west wall of long vault of temple court.



80. Miscellaneous details of Preherodian (?) period. Scale, 1:20.

#### 4. THE WEST GATE

During the whole Hellenistic period the western entrance of the city and the enclosing walls adjacent to it approximated closely to the lines of the Israelite period (Plan 10, blue). On the site of the large square Israelite tower a new tower of much smaller dimensions was erected, the stones of the previous structure being utilized to a large extent in the new work (Pl. 42 b 7). The west face of the Hellenistic tower was orientated differently, being  $17^{\circ} 15'$  west of north, so that it was not set squarely in the rock cutting. The great weight of the Roman tower afterwards built upon it had caused this face to bulge outwards about 10 cm., and had depressed the courses at the centre. On its north side the tower projected ca. 7.5 m. from the face of the main wall, the actual angle with it, however, being concealed under the mass of masonry forming the angle of the Roman curtain wall and the north round tower.

Four courses of the masonry were still *in situ*, 47, 59, 56, and 49 cm. high, respectively (Pls. 45 b 7 and 44 b 7). They were laid, as a rule, with alternate headers and stretchers, but this system did not obtain throughout. In several instances there were two headers between the stretchers, as in the Ahab walls. The surfaces of the stones were not uniformly dressed (see elevation, Plan 11). Many of the blocks still had rough bosses with chiseled margins, and others had a chisel dressing all over, as in the superstructure masonry of the Ahab period. These were the blocks taken from the older tower. In the upper row occurred stones which had "comb-picked" margins. These stones had clearly been employed to repair the masonry when it was used as the foundation for the Roman tower. The blocks were carefully fitted on the faces, and tapered towards the inside, the interstices being filled with small stones and chips. The core of the tower consisted of rough rubble masonry. The north face was of a character quite different from that of the west. Here the stones, although laid in courses, were much smaller, and were roughly fitted, without any attempt at finishing. Near the outer corner of the lowest course was a fragment of the earlier wall, which projected from below it 30 cm. The south face could not be examined, because at



the corner it was only 20 cm. from the face of the rock-scarp forming the original ramp to the gateway, and this space rapidly decreased towards the east. So far as visible, the masonry resembled that of the north face, being rough and unfinished.

The main wall running north from the tower was built in the outer part of the Israelite trench, the inner part being occupied by the Babylonian wall (Pl. 44 c 7). It was 3 m. thick, and extended  $21^\circ$  west of north for a distance of 13.6 m. Here there was a curved bastion (DE 3-4), 14.5 m. wide, projecting from the line of wall ca. 4.3 m. (Pl. 43 b 7). Only the southern end of this was *in situ* to a height of 1.5 m., and from this its radius was calculated to be ca. 8.3 m. The masonry was of rough rubble, with a facing of small dressed stones, not, however, of so fine a character as the large square tower at the gate. Inside the round bastion was a square bastion of the Greek Fort Wall which was earlier than the Hellenistic wall. Beyond the bastion the wall turned and ran  $9^\circ 40'$  west of north. The exterior face of the wall here was wholly destroyed, and its line could be traced only by the edge of the rock trench and the inner layers of masonry. Near the north end of the excavations (A 1) was a conduit of rough stones, which had been built over the ruins of the wall. This formed an S-shaped curve, and sloped downwards towards the southwest. Outside of the Hellenistic wall and extending from the Herodian wall to about the centre of the round bastion was a sloping pavement of rubble, like that below the houses of Insula VIII on the terrace south of the summit. It had probably extended along the whole length of the outer wall, but beyond the round bastion all traces of it were destroyed. It had a slope of 1 in 3, and extended out indefinitely towards the west, below the mass of debris inside the Roman walls.

##### 5. WALLS ON THE EASTERN SLOPE

Below the level of the Roman Basilica was a series of large, well-built walls, differing from the walls of the former slightly in orientation and wholly in character. The walls *in situ* formed the northwest corner of a large building, which may have been a temple (Plan 12, blue, and Pls. 48 a 7; 49 d 7; and 51 b). The inner wall was ca. 2 m. thick, and was traced towards the east for over 19 m. For the greater part of this distance it was but one course in height, as east of the Basilica the floor-level of the Roman period was quite close to the rock. The northwest corner of the wall was buried partly under the foundation of the east row of interior columns of the Basilica, and farther south the wall was wholly destroyed (BE 3-4). Outside this wall, and parallel to it at a distance of 5.7 m., was another wall, 2.6 m. in thickness. Both these walls were built of large blocks, with smaller stones used for filling. Between and not parallel to them was a third wall, sunk in a rock trench. This wall was 2.3 m. thick, and belonged to an earlier period, probably the Israelite period. The thick outer wall continued towards the east beyond the colonnade and under the debris of the Forum. At some later time a new wall was built partly inside this outer wall and partly over

it (see Pl. 48 a 7), the space between the outer wall and the Israelite wall being filled with large stones, fragments of entablatures, and other architectural details up to the top of the remaining earlier walls. Over this was built an irregular wall of small rubble, in which large blocks were also used. On the exterior this wall was faced with finely dressed masonry.

Built into the foundations of the Herodian Basilica were numbers of plain drums and Ionic capitals like those found on the summit.

## CHAPTER IV

### THE ROMAN PERIOD (Plans 2-4, 8-12)

[40 B.C.-400 A.D.]

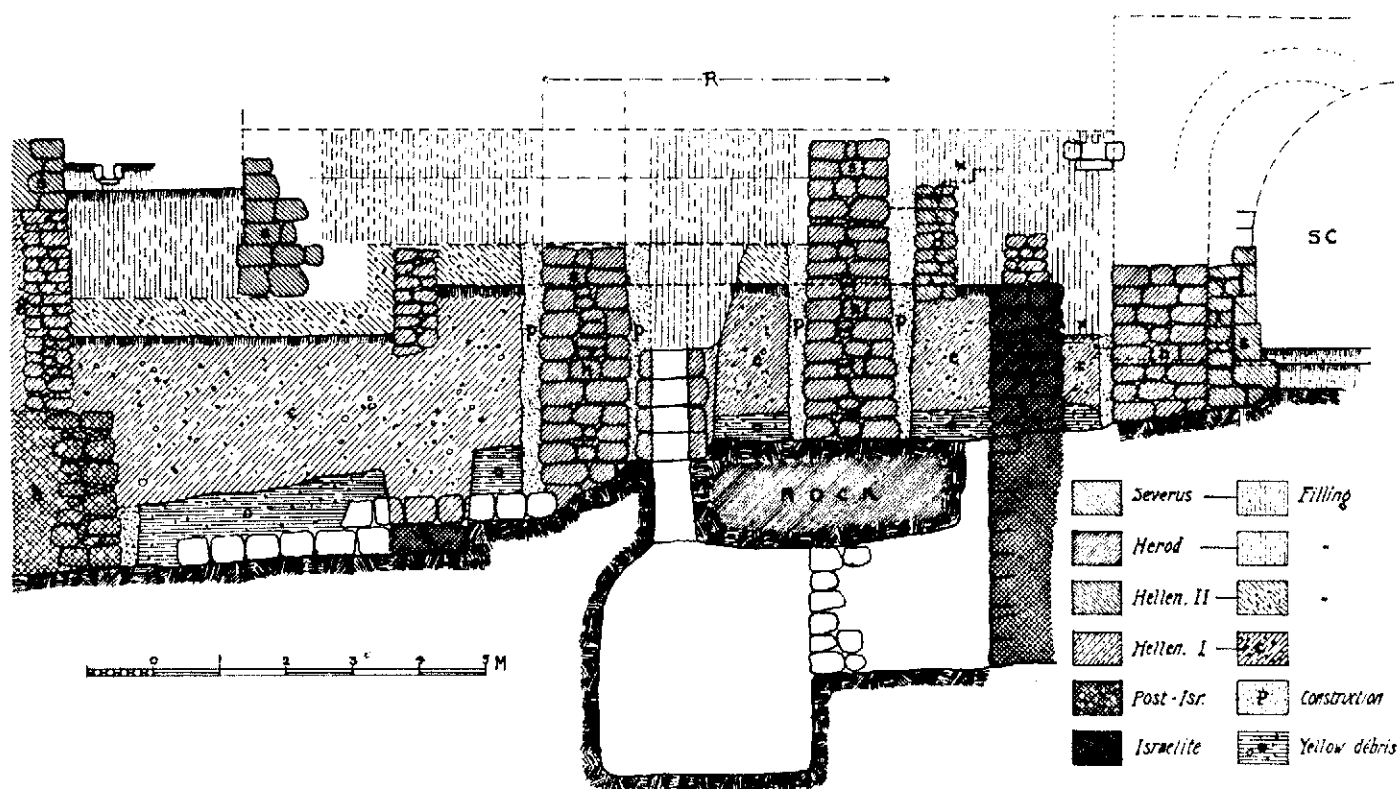
Buildings on summit—Herodian temple—Forecourt—Subterranean corridor—Vault—Stairway—Altar—Stelæ—Statue—Temple proper—Apsidal building—Atrium House—Temple of Severus—Buildings south of the temple—Calidarium—Tunnel—Architectural details of Severan period—Masons' marks—West gate—Houses near gateway—Architectural details from gateway—Street of columns—Forum—Basilica—Hippodrome—Minor excavations—Mausoleum

During the Roman period the city attained its greatest extent and magnificence. Herod rebuilt the city on entirely new plans and with an enlarged area. The enclosing walls were re-erected, considerably outside of the old lines, excepting at the western gate, the site of which was still retained as the main entrance to the city. Through the new area south of the summit a wide street, with colonnades on either side, was built from the gate eastward. This followed the contour of the hill along the foot of the cliff, which, until this period, had formed the limits of the city. On one of the eastern terraces of the hill was placed the Forum of the city, enclosed with a colonnade, and with the Basilica at its western end. The highest point of the hill was reserved by Herod for a large temple in honor of his patron, Augustus. This was erected on an artificial terrace, the retaining walls of which, protected at the corners and at the sides with towers, were built largely on the old Greek Fort Wall. On this elevation, besides the temple and its extensive forecourt, were erected several other buildings in connection with it. To the northeast of the Forum, but considerably below it, a Hippodrome was laid out, and farther along on the north side of the hill the conformation of the ground and protruding fragments of masonry indicate the site of a Theatre.

#### 1. THE SUMMIT

The complex of temple buildings was situated on a huge artificial platform, built over the old Post-Israelite fortress and the upper Hellenistic town, and its extent was largely influenced by their enclosing walls (Plan 2 red, and Plan 8). The length of the platform, from north to south, was 150 m. over the projections, and its width, from the west wall to the axis of the temple, 53 m. As only the western portion of the summit has been cleared, including the whole of the main building, with a narrow strip (S1) east of it, the entire width of the complex is as yet unknown, but was probably ca. 100 m. Along the west the new walls followed closely the lines of the Greek Fort Wall, using them to a large extent as foundations. On the north and south likewise, as far as the excavations

extended, the same was true, except that large projecting wings were built out beyond the lines of the older wall, to carry, in the one case, the north end of the forecourt of the temple, and in the other, the large apsidal building behind the temple. Along this wall were large defensive towers. The temple with its forecourt and colonnades occupied the larger part of the area. Its axis was  $14^{\circ} 30'$  east of north, so that the walls did not agree with those of any of the preceding periods. The temple proper occupied the highest part of the hill, and was elevated upon a podium 4.4 m. higher than the forecourt. The remainder of the area was from 2 m. to 4 m. below the court. The space between the west colonnade and the outer west wall was occupied by a long, narrow building divided longitudinally by long walls. Only the foundations of this were *in situ*, and it was im-



81. Transverse section through strata west of court (S11). Scale, 1:100.

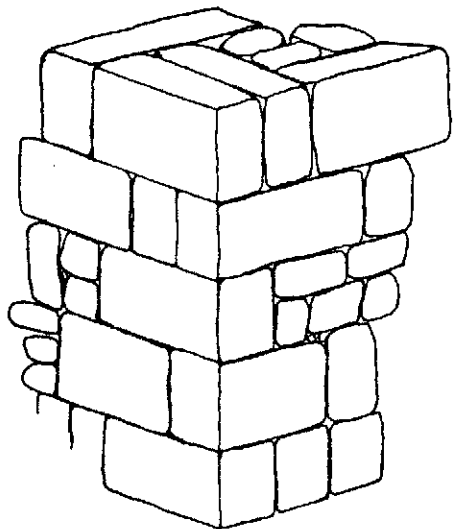
possible to determine its character. Between this and the outer wall of the platform was a street, 2.7 m. wide. This in the Severan period was 1.7 m. below the level of the court, and in the Herodian period must have been somewhat lower. From this street another, 5.5 m. wide, branched off at right angles, and extended just south of the temple vault to the west wall of the temple, along which it turned towards the south as a much narrower passage. The level of the latter was 2 m. above the west street, and the remains of a flight of steps were found just south of the long vault, extending the full width of the cross street. These, however, belonged to the Severan period, but there must have been a similar staircase here in the first period, connecting the two levels.

Fig. 81 gives a transverse section showing the relation of these walls to each other and to the earlier strata (compare Pl. 41 a 8, 9). On the right (SC) is the long subterranean corridor, with the original Herodian wall, h, and the Severan lining, s. In the centre are the foundations of the long building (R) west of the

court. The original foundations are marked h h, and the restored upper parts s s. The construction trenches in which these were built are p p, carried down through the intervening strata. The street along the inside of the west wall is at the extreme left. The position of the two flights of steps leading from the corridor to the west street level, and from the latter to the peristyle above the vault, is shown on Pl. 40 c 9. (See Plan 8 D 8.) The earlier walls and debris are sufficiently explained by the key.

To the west of the main temple building was a large house with a spacious peristyle court, and remains of a mosaic floor in one of the rooms (Pl. 35 a 9). This house, called the Atrium House, was separated from the temple by the narrow passage already mentioned and from the structure on the south by another passage running west. Below the street which bounds the southern façade was a wide and deep drain covered with large slabs of stone. The tops of these formed part of the surface of the street, the rest being filled with beaten earth, common to the streets in all periods. Behind the temple (south), and separated from it by a passage 1.8 m. wide, was a building containing a large central hall with an apsidal south end and smaller rooms on either side of it (Pl. 7 b, c 9). From its position and plan, the building must have been of considerable importance, but, as only the foundations were *in situ*, its use could not be determined. The space east of the main building must have been reserved as an open space, as there were no traces of Herodian walls, but only of those belonging to the various Preherodian periods and to the later Roman period.

*Retaining wall* — The enclosing or retaining wall of the platform was protected at the corners and sides by large irregular towers. Only those at the northwest (Pl. 41 b 9) and southwest corners (Pl. 32 b 9) and the one near the middle of the western side (Pl. 39 a 9) have been uncovered. There could have been none at the middle of the south side, because here was the projecting wing carrying the apsidal building, nor on the north side, because there must have been the monumental entrance to the temple court. The southwest tower was not rectangular, only the southeast corner being a right angle. The east and north sides of this tower were carried down to rock, with the characteristic Herodian foundation masonry (p. 178), while the south and west sides were built with the early fort walls as foundations, and therefore conformed to the direction of these foundations. The



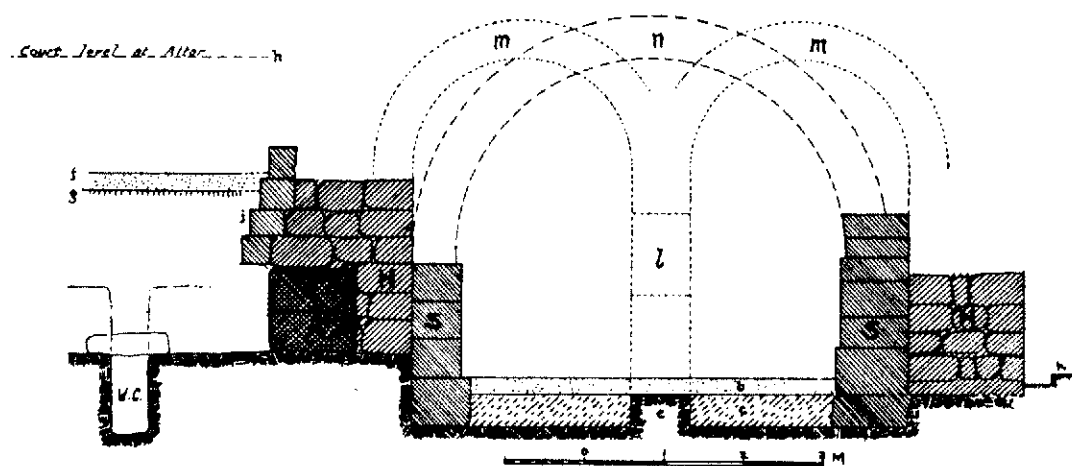
82. Masonry at northeast corner of west Roman tower. Scale, 1 : 20.

east side of the tower was 16.8 m. long, the south 18 m., the west 16.25 m., and the north 18.7 m. The south and west walls, being exterior walls, were respectively 3.35 m. and 3 m. thick, while the north and east walls were only 2.6 m. and 2.75 m. The tower near the middle of the west wall was built upon the base of the older tower inside the Greek Fort bastion at that point, and was 8.8 m. by 10.3 m. The exterior walls were of large stones roughly fitted and

roughly dressed, with the corners bonded as shown in Fig. 82. The interior of the tower was filled solidly with rubble, including numerous Doric capitals and drums of columns from the previous period. The tower at the northwest corner was also solid, and built with a finished facing over a core of rough rubble mixed with fragments of columns. The outer part of this tower had been removed by stone thieves, leaving only the south wall and a portion of the east wall *in situ*. The foundations were carried down to rock, and along the south side the construction trench, 7.7 cm. wide, was very clearly visible (Fig. 49, on p. 124). Of the curtain wall between these towers but little remained. On the west side of the street, which extends along the edge of the platform, were a few courses of the interior face of this wall, where it had been rebuilt during the later Roman period, but probably on the same lines as the first wall.

#### a. THE TEMPLE OF HEROD

*Forecourt* — North of the temple was a large open space, with colonnades on its sides, and probably also part way along its north front (Plan 8 FH 1-8). This court extended southwards from the northern edge of the platform. At its south end was the altar, and behind this a broad flight of steps led to the temple proper (Pls. 17 a; 18 c; 19 b). While only the western part of the forecourt has been cleared, its plan and character were quite evident from the foundation walls *in situ*; and the relative positions of the altar, the great staircase, and the main

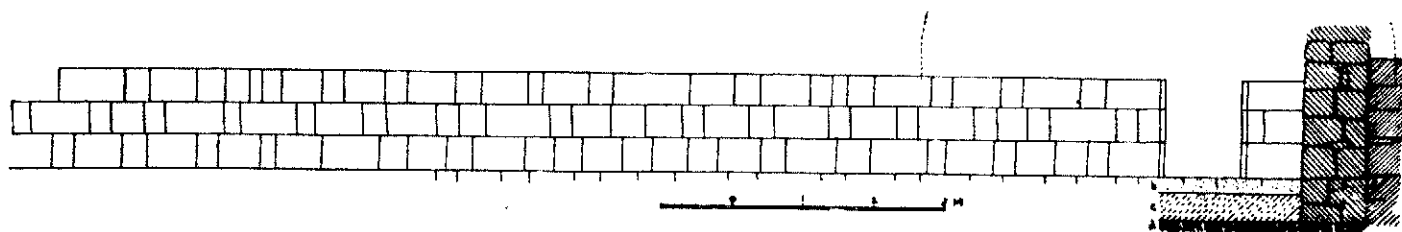


83. Section through subterranean corridor, showing its different periods. Scale, 1:100.

building were similar to those in other temples of nearly the same period. The court may be considered as having been laid out symmetrically on either side of the central axis of the main temple. At the south, or temple end, it was 48.5 m. wide. From this point northward the sides diverged, so that at a distance of 60 m. from the south side the width was 54 m. The length of the court was traced along the west side for over 60 m. To judge from the position of the steep slope forming the northern side of the summit, the total length can scarcely have been more than 70 m. At the south end its level was 437.31 m. above the sea, but the floor sloped slightly towards the north, for the purpose of drainage. A high retaining wall must have been built along the northern side of this platform,

and access to this from the next terrace, nearly 20 m. below, would naturally have been by means of a long flight of steps. The entrance was on the axis of the court, and from either side of this started the colonnade which continued along both sides of the court.

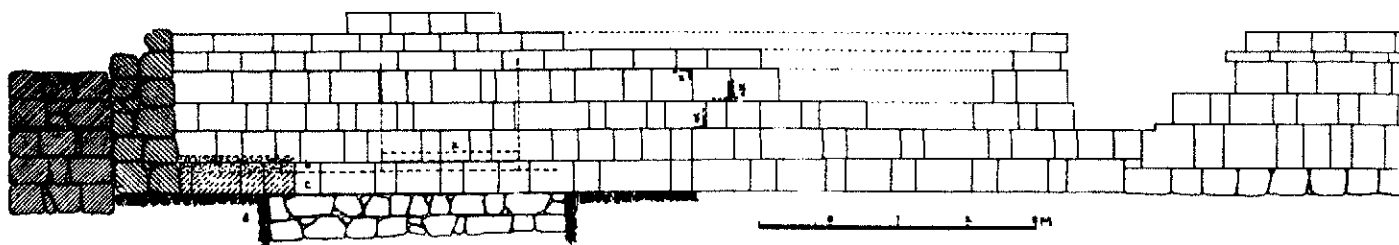
*Corridor* — On the west this colonnade was supported on a vault 6.2 m. wide (subterranean corridor), the floor-level of which at the south end was 4.86 m. below the level of the court. Owing to its gradual upward slope, the floor of the corridor, midway of its length, was 5.65 m. below the level of the court. The east wall of the subterranean corridor, which was also the retaining wall for this side of the court, was 1.95 m. thick, while its west wall was only 1.4 m. (Fig. 83 and Pl. 23 c d). The east wall was built over an Israelite wall, A, which, to some extent, may have influenced the builders in giving the wall the divergence noted above (Pl. 23 b 9). These walls were always carried down to rock. For the first



84. Elevation of east wall of subterranean corridor. Scale, 1 : 100.

23 m. of the length from the south end of the subterranean corridor, this rock surface was level, and only 40 cm. below the floor of the corridor. Here there was an Israelite scarp, 3.2 m. high, so that north of this point the walls had to be carried much deeper, following the slope of the surface downwards to the north. Against the face of the scarp a wall, 1.2 m. thick, had been built, evidently to carry a cross wall dividing the vault.

Along the central axis of the corridor were nine bases, 75 cm. square. These were cut in the rock, and the earthen floor was level with their tops. (Cf. section C-D on Plan 4, and Pl. 24 e.) They were spaced irregularly, with intervals of 2.5 m. or 2.6 m., and had carried piers of masonry (Fig. 83, l), on which had rested a series of arches running lengthwise of the vault. Upon these and the

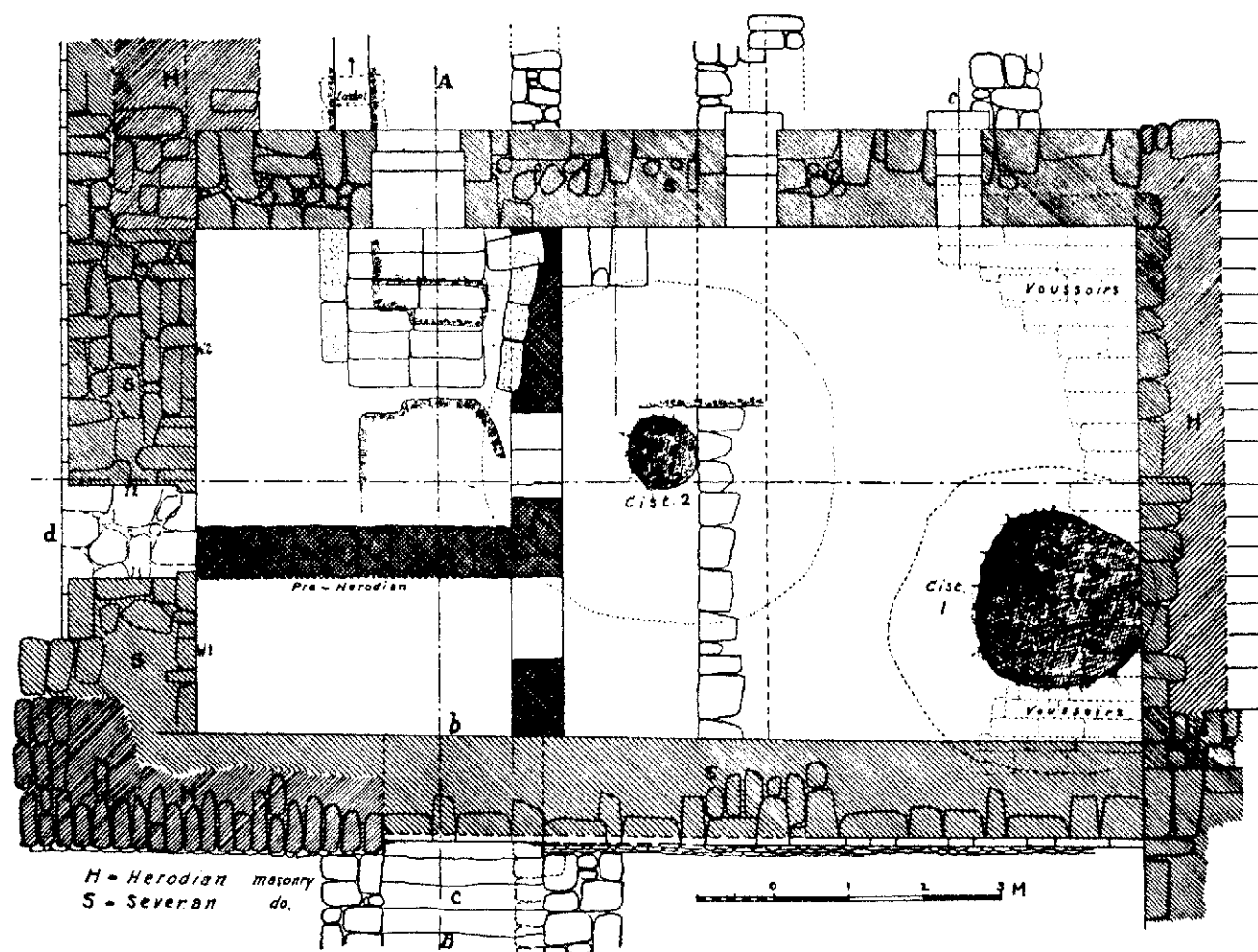


85. Elevation of west wall of subterranean corridor. Scale, 1 : 100.

sides were probably carried two long barrel vaults, m m. Beyond the rock-scarp of the corridor, in line with the row of bases, was built a foundation wall which was apparently intended to support the continuation of the arches, but none of the piers remained.

In the later Roman period, the width of the corridor was lessened by thick layers of ashlar masonry (S S) built against the Herodian walls, H H. This was dressed off smooth and stuccoed (Figs. 84 and 85), but there is no evidence that in the original structure the walls had been thus finished. At the points marked × on Fig. 85 this later stucco had been deeply grooved to represent stonework. The double barrel vault of the roof was replaced by a single vault, n (Fig. 83), and the floor raised so as to cover the rock bases of the square piers (Pl. 24 d, 10).

If we assume that the wall against the scarp was a transverse division wall of the corridor, it is possible that there existed another similar wall farther to the north, dividing the corridor into three parts, each of them 23 m. in length. This



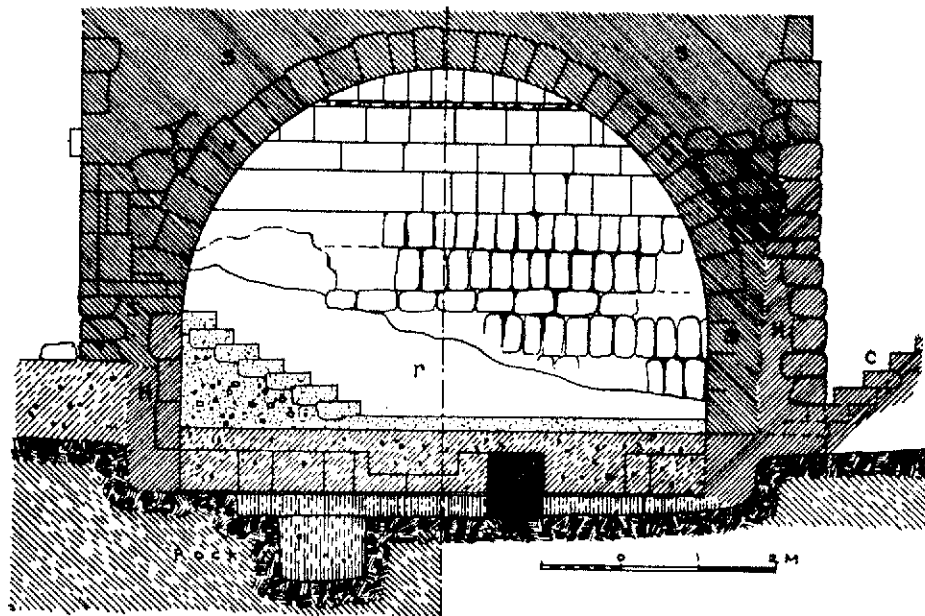
86. Plan of temple vault (EF 8). Scale, 1:100.

would give the total length of the vault, including the walls, as something over 70 m., which, as we have seen, judging from the conformation of the hill, must have been approximately its real length. The southernmost of these chambers had been entered in Herodian times through a doorway, k (Fig. 85, and Pl. 24 e 9), 1.9 m. wide, near the southern end of the west wall. During the later Roman reconstruction this door had been filled with masonry, and the dressed ashlar facing carried across it. But below this later masonry the first two steps of a flight leading upwards to the west were found, and farther west were some additional steps of a flight adjoining this (S8-841), but rising towards the colonnade. No doubt, the lower flight led to the level of the west street, which was approximately half-way between the level of the corridor and that of the colon-

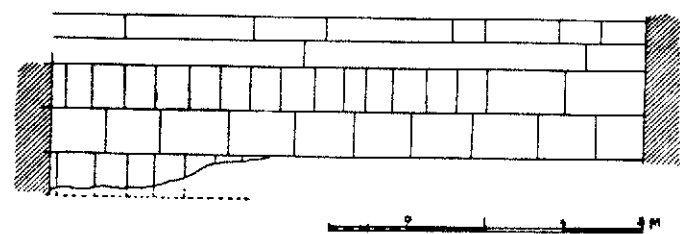


nade, and the other flight continued from this level to the colonnade (see x x, Fig. 81 on p. 168). The other divisions of the corridor may have had similar entrances.

*Temple Vault* — From the south end of the subterranean corridor a vault, 6.7 m. wide and 12.5 m. long, at right angles to it, extended to the facing wall of the great staircase (Fig. 86, and Pls. 22 a; 24 b). This may originally have been quite closed off from the subterranean corridor. Its original door, B, was 2 m. wide and was on the south side, and opened on to a steep flight of steps, c, leading from the street west of the main temple building. During the later reconstruction of the building this was walled up and a new doorway, d (Pl.



87. Section A-B through temple vault. Scale, 1:100.



88. Elevation of north wall of vault, showing three lowest courses of Herodian masonry. Scale, 1:100.

22 b, d 10), made, connecting it with the subterranean corridor. At the same time all the division walls of the corridor were done away with. The temple vault was faced throughout with dressed masonry, except at the eastern end, where the lower part of the wall consisted of a rock-scarp, r (Fig. 87), plastered with cement. The only portion of this masonry which belonged to the Herodian period was the three lowest courses in the north wall, which, according to the characteristic Herodian method of construction (see p. 178), were laid entirely of headers or stretchers (Fig. 88).

The other portions of the facing walls had been entirely rebuilt. Outside the south wall, where the entrance had been, the excavations disclosed the regular Herodian foundations. The later structure was covered with a single barrel vault, of which one complete and several incomplete rings were still *in situ*, v v, and, as there was no trace of any central division, it may be that in the first period also there was a similar single vault (Pl. 24 b 10).

Estimated from the height of the walls and the width of the barrel vaulting, the floor of the colonnade must have been from 1.5 m. to 2 m. above the level of the great court.

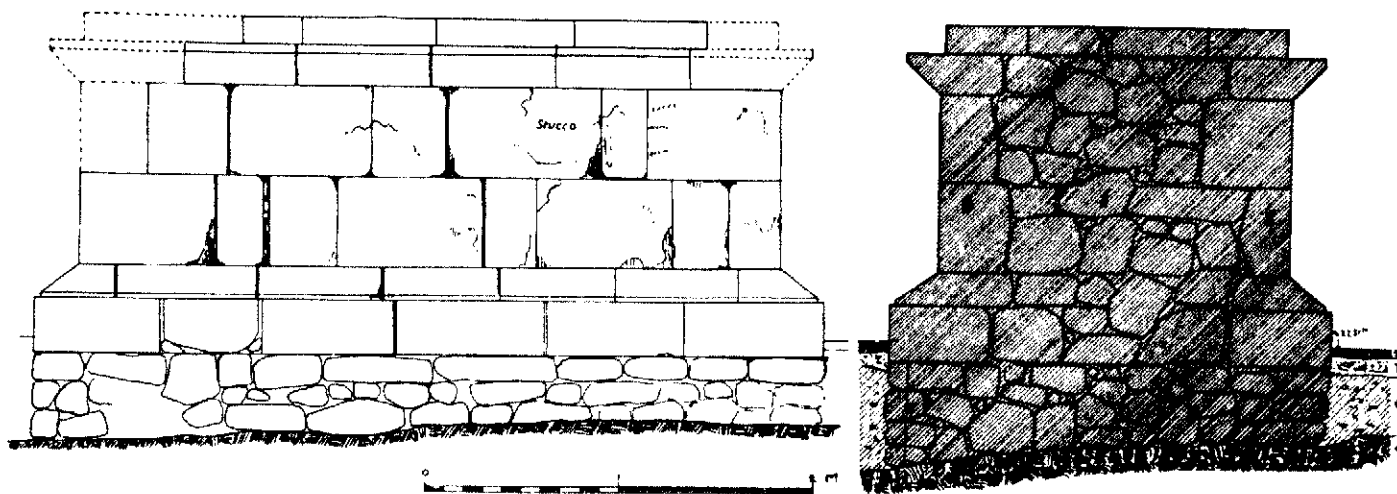
The surface of the rock to the east of the court was much higher than that to the west, and it is, therefore, not likely that such elaborate substructures for the eastern colonnade were necessary. It is certain that no vault similar to that

on the west of the staircase existed on the east. There was, however, on the east a foundation wall in line with the north face of the vault.

*Staircase* — The main building was set back 19.5 m. from the line of the court, and the greater part of this recess was occupied by the monumental staircase. This extended the full width of the building, 21.8 m. (Pls. 17 a and 18 c). The lower part was masked on the sides by the two small buildings which were erected upon the vault to the west and upon the foundations corresponding to it on the east.

There could not have been much difference in general plan between the Herodian staircase and the Severan staircase, which was found *in situ*. From the latter we found that the average width of the treads was 38.5 cm., and their average height 18.6 cm. As the podium of the earlier temple was approximately the same height as the later one, i.e., 4.40 m. above the court, the staircase consisted of 24 steps, making a total height of ca. 4.45 m. These were divided into two equal flights by a step 1 m. broad. The position of the Herodian staircase was determined by the fragment of foundation *in situ*. The staircase began ca. 5.5 m. behind the line of the court and extended ca. 9.5 m., leaving a platform 4.5 m. wide before the temple portico.

*Altar* — At the foot of the staircase (G 7), and nearly 1.5 m. inside the line of the court, was the altar (Pls. 17 a; 18 c). It was not on the axis of the temple, but its centre was 60 cm. to the east. It was built upon a foundation of small rubble masonry, e, 35–50 cm. in depth, resting upon the sloping rock surface, d (see Pl. 18 b and Fig. 89). It was 1.81 m. wide and 3.6 m. long, with its long



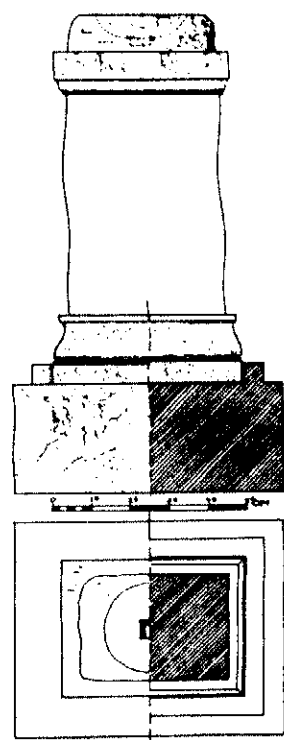
89. Elevation of north face of altar, and section. Scale, 1:40.

axis parallel to the staircase. The total height was 1.74 m. The base, 45.5 cm. high, was composed of two members, a plain plinth course 28 cm. deep, and a beveled course 17.5 cm. high. A narrow fillet, 2 cm. deep and set in 3 cm. to 4 cm. from the edges, separated the two. The projection of this base varied on different sides, being 26.5 cm. on the north, or best preserved, face and 22.5 cm. on the west. The cornice, 21 cm. deep, consisted of a plain beveled course, with a 4 cm. fillet above it. Its projection varied from 15.5 cm. to 17.5 cm. Above this was a plinth 15 cm. deep, set in all round 2 cm. from the main face of the altar.

The exterior was of well-dressed and well-bonded masonry (g), laid in regular courses. The main face was of two courses of alternating headers and stretchers, with the base and cornice courses laid as stretchers only. The interior was filled with rubble (f), and the top plinth (h) consisted of small slabs built over and concealing this rubble core. The facing stones appeared to be very loosely fitted vertically, some of them being separated as much as 3 cm. Whether this loosening was due to strain or to bad workmanship is uncertain. It had, however, been concealed under a coating of white stucco, of which patches 1 cm. thick remained on the south side. In the debris around the altar were a number of fragments of fine thin white marble slabs, with well-cut letters. These pieces may have belonged to a dedicatory inscription fastened to the face of the altar, or to the walls of the temple above. (See p. 19 f.)

*Stelæ* — Along the east side of the altar, and at distances varying from 8 cm. to 28 cm. from it, had stood a row of three votive altars or stelæ, and in line with them, but nearer to the foot of the staircase, was a fourth (Pl. 18 c). They all belonged to the Severan period, but are treated here because they formed a distinct part of the altar group. Of Nos. 1, 3, and 4 only the bases remained *in situ*, the stelæ themselves being missing. No. 2 still stood on its original base, but it was so badly weathered that the inscription was for the most part illegible. The base of No. 1 was 53 cm. by 64 cm., and was a plain plinth block, 30 cm. high, with a shallow mortise, 39 cm. by 50 cm. in its top, to receive the base of the stela.

Stela No. 2 (Fig. 90) stood on a base 55 cm. wide, 69 cm. long, and 38 cm. high. Its top had been cut to form a rim 5 cm. deep and set back 5 cm. from the edge all around, forming a mortise for the stela. On the east side this rim had been cut away. The stela was 95 cm. high. It had a plain plinth base only 9.5 mm. higher than the mortise in which it rested, so that only a narrow portion of it showed above the rim of the latter. Above this was a very poorly cut cyma reversa, with a fillet 1.8 cm. above it. This molding projected only 4 cm. from the main face of the stela, a flatness of molding characteristic of all the later Roman work on the site. The face of the stela was 56.6 cm. high, and tapered from 40 cm. in width on the inscribed (east) face to 39 cm. at the top. The width on the side was 27 cm. The stela was crowned by a cyma recta, with a fillet below, and above it was the top plinth, 7 cm. high, and projecting 5 cm. Above this was probably another rectangular plinth, but the surface was worn away to an irregular shape. In its centre was a circular depression, 23 cm. in diameter and 8.5 cm. deep. This was obviously a socket for a bust or other ornament, as there was a small square dowel hole at the bottom. Nothing, however, was found in the neighboring debris which would afford any clue as to what had been placed upon the top of the stela. (For the inscription see Pl. 59 e, and p. 21.)



90. Votive altar No. 2. Scale, 1:20.

No. 3 was considerably larger than the other bases, being 76 cm. wide, 83 cm. long, and 30 cm. high. Instead of a single rim, it had one with two steps enclosing a mortise 33 cm. by 47 cm. No. 4 was a plain base without any rim, 45 cm. by 61 cm., and with no mortise cut in its top.

All of these bases were sunk to varying distances below the surface of the court, and rested merely on the debris filling, without any other foundations or footings. No. 1 was at a slightly higher level, as the earth surface below it had been sloped up to join the short flight of steps of the Severan period.

During the season of 1908, when the altar and stairway were dug out, another fine stela, No. 5 (Fig. 91, and Pl. 59 d), was found lying in the debris on the



91. Altar No. 5, found in 1908 above staircase, near altar. Scale, 1: 20.

lower part of the staircase, opposite the altar. It was in good preservation, only portions of the top being broken off, but all the fragments were found near it. The stela did not fit any of the bases *in situ*, so that, if it formed a part of this group, its actual position is lost. It was made of hard, local stone, and the inscription, while irregularly and carelessly cut, was quite deep, and had originally been colored red. Traces of this color remained in the corners of the letters. The height of the stela was 1.26 m. The base, 40 cm. in height, was composed of a plinth of 25 cm., then a torus and fillet of slight projection with an inverted cyma recta and another fillet above it. The face of the stela was 40 cm. high and 40.6 cm. wide, and had no taper. The crowning moldings consisted of a cyma recta between fillets supporting a plinth, the whole height being 13.6 cm. Above this at the four corners were plain acroteria, which enclosed a circular plinth 27 cm. high. In the centre of this was a shallow basin, which in this case seemed to be the usual focus. There was no trace of fire, and the basin was, therefore, used for libations only. (See p. 20, No. 30.)

*Statue* — In the debris east of the altar was found a mutilated marble statue of heroic size lying on its back (Pl. 79 e f). The legs were missing and also both arms and the head. The length of the figure from base to neck was 2.4 m., and with the head the statue must have been very nearly 3 m. in height. The workmanship was exquisite and the proportions and modeling of the portion preserved represented the best Roman period. The figure can scarcely, therefore, have belonged to the later Roman occupation. On the right breast were the insignia of an emperor, and we can hardly be wrong in assuming that the statue was a portrait of Augustus, to whom the temple was dedicated.

In the debris near the southeast corner of the building was found in 1908 a fragment of a large head containing the forehead, both eyes, and part of the nose. This was also of marble, but of a slightly different color. As it was modeled to the same scale as the large figure, it may have formed part of a new head affixed to the statue during the later period.

*The Temple* — The temple (FH 10–13) was raised on a podium 4.4 m. high. Of the original building we have only foundations, but these were so largely preserved as to show the complete plan. At some parts they remained standing up to the beginning of the dressed masonry. On the north side several courses of this masonry were still *in situ*. The dimensions over the foundations were 23.95 m. by 34.9 m., very closely approximating 2:3. At a distance of 6.95 m. from the north end was a cross wall (Pls. 6 a, c 9; 10 c, d 9; 20 a 9). This carried the front wall of the cella (5). The space to the north, approximately one-fifth of the length, was given to the portico (3). South of the cross wall the building was divided into three parts longitudinally by long walls bonded into the cross wall and the rear wall (Pls. 6 c 9; 8 d 9). These walls were 4.07 m. and 4 m. from the exterior faces on the east and west sides respectively. The space between them was 12.45 m., so that the cella (5) had approximately this width, and was 24.35 m. in length.<sup>1</sup> The side aisles (4) and (6) were 2 m. wide. On the west side, 4.8 m. from the front, were the foundations, unmistakably Herodian throughout, of a wing 5.6 m. wide and 12.1 m. long. Before the entire area south of the temple had been cleared it seemed that the wall just south of the rear wall and nearly the same distance from it as the inner walls were from the sides of the building, belonged to the temple, and that the temple had, therefore, been peripteral (see walls 9 9 in centre of Pl. 10 a). But no intercolumniation could be found which would work out perfectly for the short and the long façade, especially taking into account the disturbing wing on the west. Further excavation disclosed that the wall in question was the north wall of the large apsidal building, and not a part of the temple at all. It was not quite parallel to the south wall of the temple and towards the west it extended beyond the limits of the latter. The foundations of the main temple were found to be widened at the angles to carry pilasters.

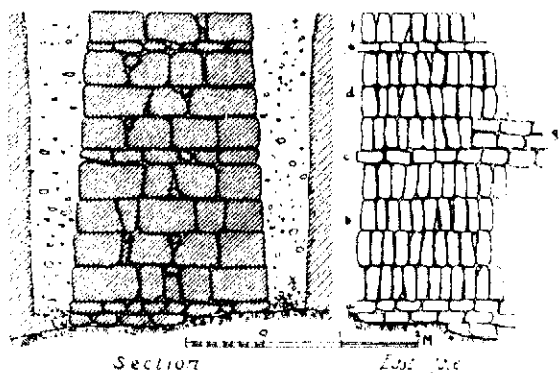
*Construction* — Near the northeast corner, where the rock was highest, the surface of the rock was only 20 cm. below the court level. At the southern wall it was 5 m. below, and near the middle of the western wall it was 3.97 m. Trenches ca. 1 m. wider than the proposed wall were cut down through all intervening debris to this rock surface, or to an equivalent solid foundation, such as the Israelite walls afforded. All the small walls of the intermediate periods in the line of the trenches were destroyed. In these trenches the foundation walls were built, the space on either side being afterwards packed with some of the debris taken out of the trenches.

The foundation walls were not of uniform thickness, and each one was made wider at the base, the successive courses being set back slightly from those below. The exterior walls were nearly 2.5 m. thick at the base, and 2.1 m. at the top, while the inner walls were 2.1 m. at the bottom and 1.7 m. at the top. The stones, taken largely from the earlier buildings, were roughly squared slabs, ca. 50 cm. to 70 cm. long (a few nearly 1 m.), while the width varied from 35 cm. to 45

<sup>1</sup>All dimensions had to be taken over the rough and irregular foundation walls and could in themselves be only averages.

At no two points over the walls would exactly the same figures be obtained.

cm., and the thickness from 10 cm. to 30 cm. Sometimes Doric capitals and fragments of entablatures from the Hellenistic and Preherodian towns were built into the lower courses of the walls (Pl. 10 b). The system of construction, while not uniform throughout the whole structure, adhered rather closely to one general scheme, and was characteristic of the period. The first course, resting on the rock, was always composed of stones laid flat. In some places there were two, or more rarely three, of these flat stretcher courses to bring the footings up to a uniform level (see wall 9 at left in Pl. 10 a). The remainder of the wall was laid with groups of courses varying in number, laid throughout as headers on edge,

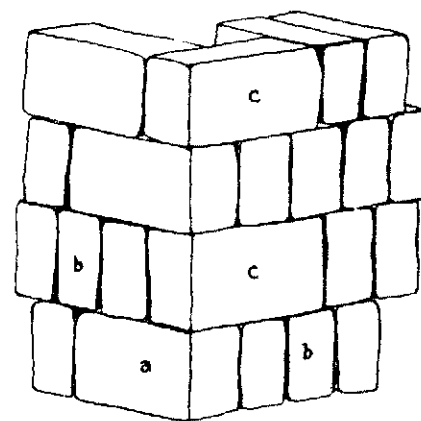


92. Characteristic masonry used in Herodian foundation. Scale, 1:100.

with a single or double course of stretchers separating each group. In the outer, western wall (Fig. 92, and Pl. 10 a), which was preserved to a height of nearly 3.7 m. at the southern end, there were two courses, a, of stretchers on the rock, then four courses of headers, b, with an edge of from 36–45 cm. each. Then a course of stretchers, c, of 16 cm., with three header-on-edge courses, d, 40–43 cm. deep. Further north, along this same wall, there remained above this an additional

stretcher course, e, 10 cm. deep, and a header course, f, of 40 cm. In a part of the wall the lower header course of the upper group, d, was replaced by two stretcher courses, g. The top of the wall, upon which was laid the dressed superstructure, was usually laid with flat stretchers; but along the eastern and northern sides the dressed masonry was laid directly upon the header courses.

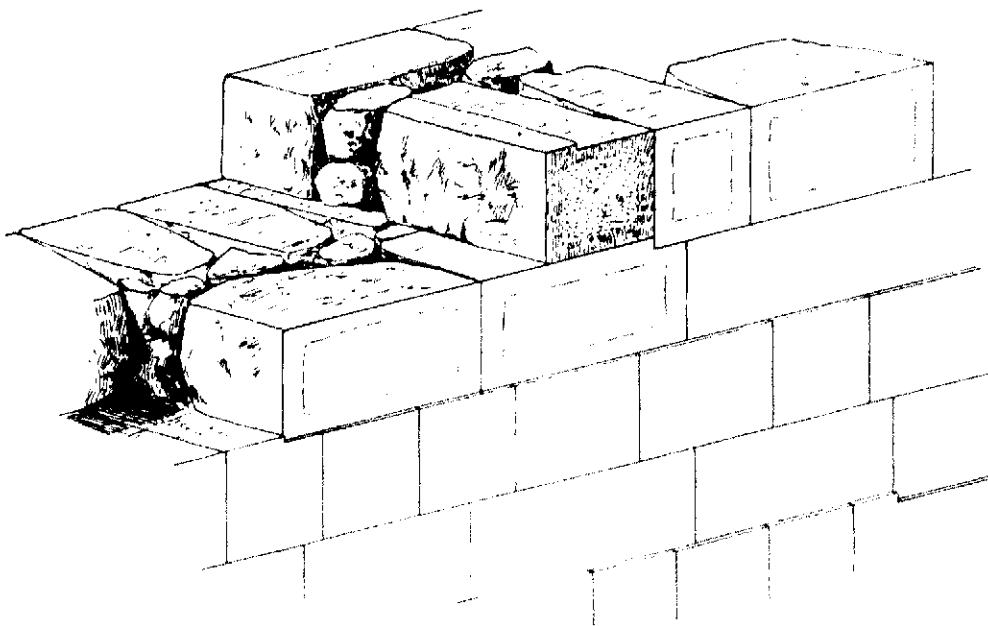
The angles were well bonded together, the system being a natural result of that employed in the other parts of the walls (Fig. 93). The headers (b b) in alternate courses at the corner became stretchers (c c) on the adjacent faces, so that a stretcher bonded with three headers above and three below it. Where flat stretcher courses occurred they were arranged in the same manner, and the courses were set back to conform to the batter on both faces. Three stones laid end to end were commonly equal to the top thickness of the wall, i.e., 2.1 m. Lower down there were four or even five stones, with odd drums of columns, etc., used to fill in. Small stones were used, both between the joints of the lower courses and to pack the interior, and the whole was laid in common mud mortar. But little care was shown in breaking joints, owing to the irregular character of the stones. As the wall was afterwards embedded in packed debris, there was, moreover, little danger of its shifting.



93. Construction of an angle of Herodian foundations (sketch).

While no portion of the temple structure remained standing above the Herodian ground-level, we have an example of the way in which the masonry of the

superstructure was finished. This was in the north wall of the vestibule, where some three to five courses of dressed stones were in place through the whole width of the building. The courses varied from 40 cm. to 58 cm. in depth, and, while the coursing extended through the wall, the interior of the wall was filled with small rough stones (Fig. 94). The method of laying the courses differed from that used in any other period, and enabled us to identify at once the Herodian masonry, not

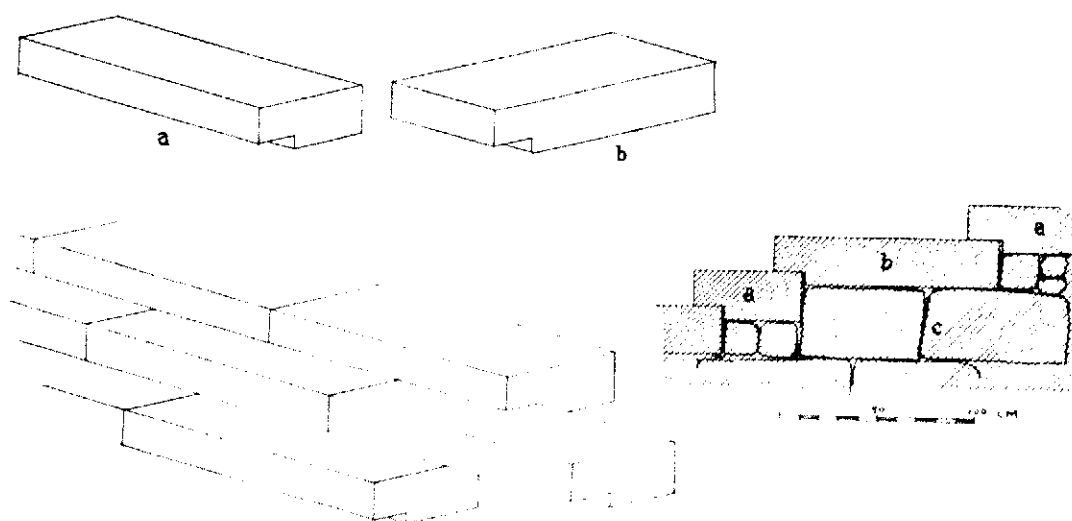


94. Characteristic Herodian superstructure masonry.

only here, but at other parts of the site. On top of the rough foundation masonry was laid a course of stretchers only, some of them nearly 1.2 m. in length. The next course was laid entirely as headers, the joints being carefully and with some degree of regularity broken in every instance (Pl. 20 a 9). Succeeding courses alternated as headers and stretchers. Nowhere was there a course composed of both headers and stretchers, as was the system used in all periods of the Israelite masonry, in the periods before the Roman, and, as we shall see, also in the later Roman restoration of the building. The same system was found at the West Gate (q. v.), and in the lower and earlier courses of the walls of the

smaller vault.

All bosses had been chiseled off, and the stones finished with chisel-picked centres and comb-picked margins, ca. 10 cm. wide. The blocks were fitted on the edges only, and



95. Method of construction used in staircase. Scale, 1:40.

tapered inwards, the interstices being filled with small stones and mud.

The staircase was constructed of specially cut stones. Those used in the latest Severan structure were probably taken from the older building. The blocks were of two shapes (Fig. 95). One series (a) were cut with a rabbet on the under



side running lengthwise of the stone. The other (b) had this cut on the short edge of the stone. The blocks were laid so that they overlapped the stone below (see section). The blocks cut lengthwise were used exclusively for the



96. Ridge tiles from temple.  
Scale, 1:4.

flights of narrow steps, and those cut on the short edge, for the broad central step. In the reconstructed staircase some of the a blocks were used in the broad step, and pieced out with plain slabs. The steps rested on a foundation of rough stones, c. In the

Herodian period the foundation was composed entirely of headers on edge, like the other foundation walls, but in the Severan period the foundations were simply a mass of rubble. The end walls were faced with dressed masonry.

*Roof*—In the debris were a number of broken roof tiles of thick, coarse, red terra-cotta, and a number of ridge tiles (Fig. 96).

#### b. THE APSIDAL BUILDING (EH 13-16)

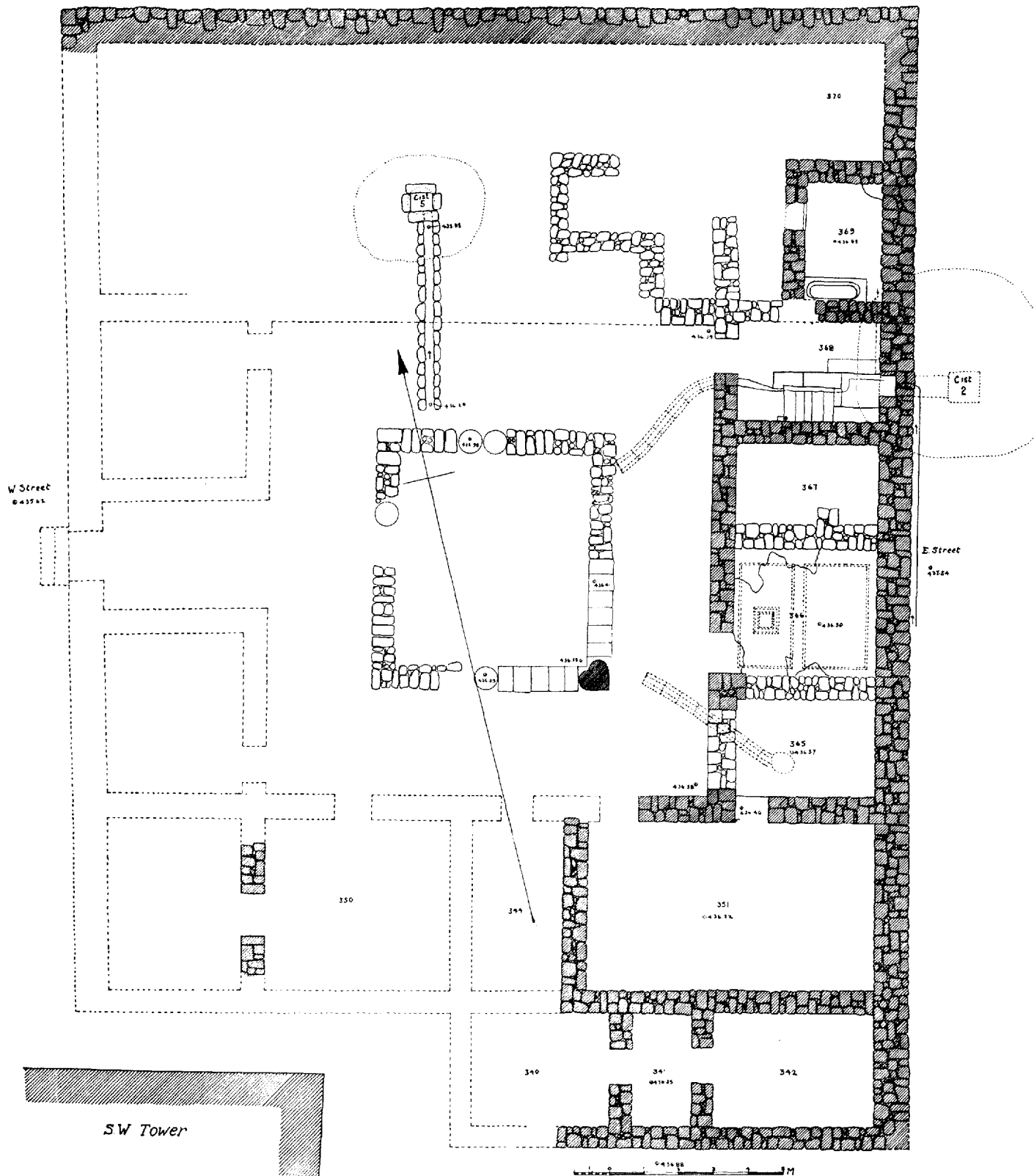
Immediately behind the temple (i.e., south of it), and separated from it by a passage ca. 2 m. wide, was a large building. We called it, from its principal feature, the apsidal building, but its purpose is not known. This building was 25 m. wide and 34.4 m. long, and was not rectangular in plan. The south wall was the south wall of the temple enclosure, which for some reason, possibly an error, was laid out at an angle with the main axis of the building, while the north wall was made almost, but not quite, parallel to the temple series. In the centre of the building was a great hall, 11.5 m. wide and 16.5 m. long, including the semicircular apse at its south end (Pl. 7 b c 9). The latter had a radius of 4.35 m. On either side of this central hall were smaller rooms. Those in the corners on either side of the apse were 5.5 m. square. The foundations of the walls adjacent to it were Herodian. It was built inside and separate from the outer wall, which had been largely rebuilt during the Severan period. The internal structure had been badly cut to pieces by stone thieves. The two corner rooms at the apse had Herodian foundations, and on the west their north wall extended through to the outer face, and can be seen quite clearly in Pls. 7 a 9; 25 a b; and 26 c; and in section C-D on Plan 4. The rest of the space on either side of the central hall must have been divided into small rooms during the Herodian period, as there were several fragments of walls of this period still *in situ*. But the greater part of the interior structure had been rebuilt during the later period.

#### c. THE ATRIUM HOUSE (CE 9-12)

The Atrium House occupied an entire insula to the west of the temple. Between it and the projection on the western façade of the latter was a road only 1.9 m. wide. On the north a wider space separated it from the rear walls of the western colonnade, while the street running along inside the western wall of the enclosure formed its western boundary. A narrow, irregular passage lay between



the house and the south wall, if, as we suppose, the latter was built upon the old Greek Fort Wall.

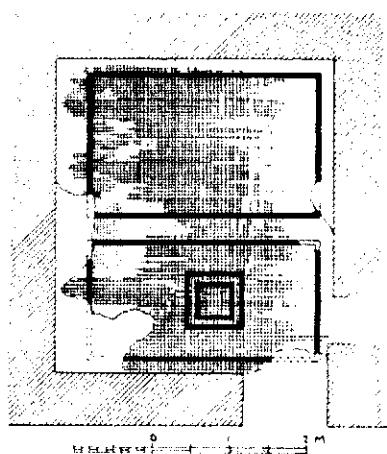


97. Plan of Atrium House. Scale, 1:150.

*Plan*—The entire length of the north and east foundation walls was *in situ*, and along the east a considerable portion of the superstructure as well (Fig. 97). Nothing of the western wall, with the exception of the northwest corner, could be found, and only that portion of the south wall outside of rooms 340 to 342

was *in situ*. The rest must be restored according to the walls on the interior of the building. The length of the building from east to west was 24.4 m. and from north to south 32.5 m. The east wall was orientated  $13^\circ$  east of north, which was  $1^\circ 30'$  off the axis of the temple, but this difference was obviously the result of using for the foundation a fine continuous earlier wall below it. The interior division walls of the northwest and part of the south end of the building were either entirely missing or so fragmentary as to leave us in doubt as to the exact arrangement of the house. The main features were fortunately, however, quite clear (Pl. 35 a 9). The central portion of the building was given up to the usual court, 13.47 m. by 12.5(?) m.<sup>1</sup> The level of this was 436.28 m., or 1.28 m. below the level of the street along the east side of the house. The central part, 6.6 m. by 5.45 m., was open to the sky, and on all four sides was a peristyle, varying in width from 3.48 m. on the east to 3.72 m. on the north. Each side consisted of a single round column between engaged columns at the corners backed by square piers. None of the columns were *in situ*, nor any of the piers except the lowest block of the pier at the southeast corner. Below the columns and piers was a curb composed of flat slabs laid as headers, averaging 50 cm. in width and ca. 75 cm. long. These were laid on a shallow foundation of rough rubble, into which were incorporated drums of columns from an earlier building. The floor of the peristyle itself was of beaten earth, filled in flush with the top of the curbing, 10 cm. above the level of the open court.

At the southeast corner of the court a door 2.25 m. wide led into a small room, 365, which apparently formed a sort of ante-room to the larger room north of it, 366. This doorway was afterwards filled up with ma-



98. Mosaic floor in room 366.  
Scale, 1:100.

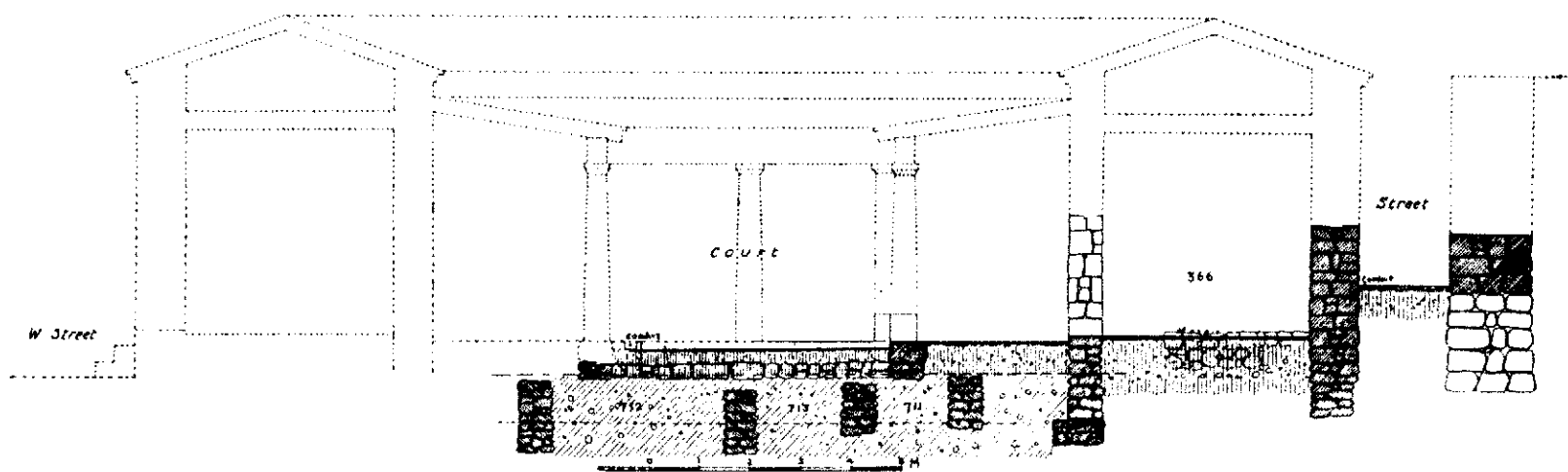
sonry like that in the walls of the house, and the side next to the court at least was plastered over to form a continuous face. At the same time, no doubt, the cross-wall separating 365 from 366 was built. The latter room, however, had also its separate door to the court, and was one of the important rooms in the house. The floor was covered with a simple mosaic, consisting of a white ground divided by narrow bands of black into two rectangular panels (Fig. 98). The tesserae were ca. 10 cm. square and were laid on a hard-packed earth basis, with a thin cement surfacing. The panels were of unequal

size, that nearest the door being somewhat narrower, and containing a small additional square panel with a double border of black. No trace of this pavement was found in the northern half of the room. It is possible that foundations discovered here (see plan, Fig. 97) had supported a wall which divided this space into two rooms, 366 and 367, in the original plan of the house. At the northeast corner of the court a door 1 m. wide led into a small room, 368, from the floor of which a flight of steps led to cistern No. 2 under the east

<sup>1</sup>The west wall was destroyed, even traces of any special foundation having disappeared. The footings under the west edge of the peristyle were, however, still *in situ*, and, if the width

of the latter was the same as it was on the east or south, the west wall of the court would have rested upon the west wall of the Osorkon House, as was probably the case.

street (Pl. 34 a +). This cistern was fed by two conduits. One of them, made of hollowed blocks of stone covered with slabs, led from the northeast corner of the atrium to the steps, whence the water ran down an irregular gutter along one side of the steps. The other conduit, built of plaster-lined rubble, ran along the western side of the Herodian street from the south to a point over the cistern and emptied into it through a hole in the roof. The cistern stair descended eastwards to the street wall, where it turned northwards to a wide landing. From the landing a few more steps descended eastwards again to a narrow passage, which led through the foundations of the house and under the street to the side of the cistern. The passage was roofed with two rows of inclined stones like the tunnel in L. T. E. The cistern itself was of the usual bottle type, but of unusual size. It was 5.39 m.

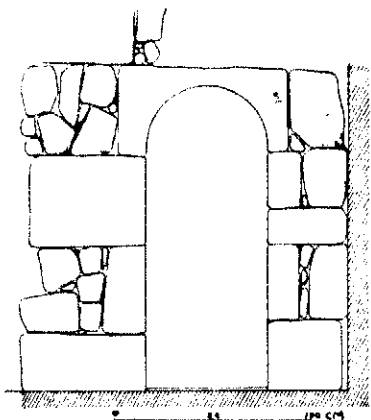


99. Section A-B through Atrium House. Scale, 1:150.

by 5.57 m. in diameter, and its bottom was 11.25 m. below the street. The surface of the rock was 4.55 m. below the street, and the shaft, lined with masonry, extended from the rock to a point above the roof of the entrance passage. Here the shaft was roofed with stone slabs to carry the street over it. Rabbed jambs at the top of the stair showed that the approach to the cistern could be closed by a door. It was also clear that the waste water from the bath-room on the north must have drained into the cistern. The steps and a fragment of the door-jamb belonging to the older house were still *in situ*, but did not project above the floor-level of room 368.

The bath-room (369) clearly belonged to the original house, but the uneven rubble walls to the north and west of it did not (Pl. 34 a). It was entered through a round arched doorway in perfect preservation. It had no direct communication with the main court, but must have been accessible from it either through the cistern room 368 or through another chamber to the west, now destroyed. The room was 2.15 m. by 3.35 m. in size. The floor was plastered with a hard lime cement mixed with ashes, which ran up on to the walls and was molded into a ridge 2 cm. high across the door, to keep the splashings from flowing outside. In the northeast corner was a curved bench of masonry, 39 cm. high,

covered with cement. On the south side was the bath-tub, made of a mixture of lime mortar and pebbles. In size and shape it resembled a modern tub.



100. Door to bath-room 369.  
Scale, 1: 40.

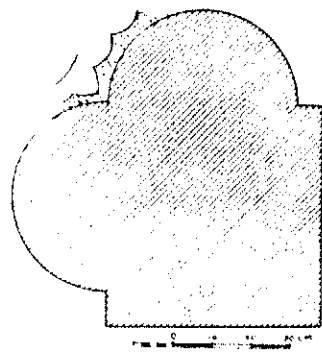
Outside it was rectangular, 69.5 cm. wide, 176 cm. long, and 61 cm. high, the sides being vertical. The interior was formed with rounded ends, and, while the south side was nearly vertical, the other sides were sloping. At the top the dimensions were 51 cm. by 154 cm., decreasing to 42 cm. by 138 cm. at the bottom. There was no outlet to this basin or tub, and water had to be brought to it in jars or skins, and either baled or siphoned out after the bath. Between the end of the basin and the outer wall of the house was a small space, with an outlet on the floor-level for water to run into the adjoining room. The

door to the bath-room was 65 cm. wide and 1.56 m. high to the top of the arch. The jambs were constructed of large stones laid alternately as headers and stretchers (Fig. 100), and the arch itself was made from two blocks side by side well bonded into the jambs, and the lower part cut out in the form of an arch (see inner face of door, Pl. 34 a).

In the southeast corner of the house were three rooms belonging together. No. 341 was 1.7 m. by 3.2 m. It opened on the east into 342, which was 3.2 m. by 4.6 m., and on the west into 340, which was 3.2 m. by 3.95 m. There was no apparent connection between these rooms and the rest of the insula, as there was no trace of any opening in their north wall. The floor-level was 3 cm. below the east side of the court. To the west of the large room 356 were several rooms, whose walls were destroyed to below the level of the floor of the other rooms. As the hard earth floor had been destroyed, it was difficult to determine whether these walls were part of this house or belonged to the preceding house, the floor-level of which was only 5 cm. to 10 cm. below that of the Atrium House. At the west of this group, however, there was a room (350) with a door, which, from its level and the general characteristics of the masonry, certainly formed part of the series of chambers on this side. Beyond this and along the whole of the western façade all traces of the house had been swept away.

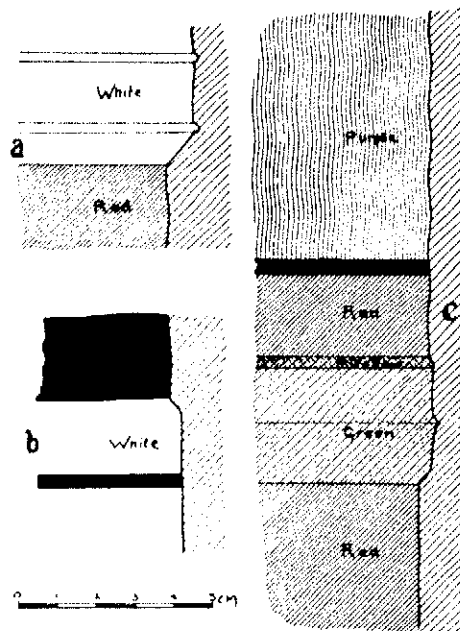
*Drainage*—The slope of the open court was towards the northeast corner, whence a large channel led to a cistern, No. 1, in room 368. The other conduits and cisterns under the floor of this house belonged to earlier periods.

*Construction*—The facings of the walls were of squared stones of various sizes, well fitted together. The core of the walls was, however, of rubble, into which the headers of the exterior facing bonded. The piers and columns were built up in sections and finished in stucco. On the fragment of pier remaining at the southeast corner of the court several pieces of this stucco still adhered, showing that it was molded into flutes with sharp arrises running down to the floor-level without any base (Fig. 101).



101. Detail of corner  
pier. Scale, 1: 20.

The walls of the court and all the interior walls had been covered with a thick layer of stucco, the body of which was composed of white lime mortar mixed with fine pebbles. Over this was spread a thin finishing coat of pure lime mortar. This was then paneled, and painted with various colors. None of this plaster was *in situ*, but a large number of fragments were found in the debris of the rooms. In Fig. 102 are given the sections and color schemes of the most important of these fragments. The first piece (a) was part of a panel, which was sunken 6 mm. The field was white, and had a sharp beveled edge, with a frame of bright red. Inside the edge of the white panel were two parallel grooves 20 mm. apart. The next fragment (b) was also a panel, recessed only 3 mm., and with a curved edge. The field was white, with a narrow band of black near its edge, and the panel was enclosed with a wider border of black. The fragment c, another panel, was more elaborate. The field was purplish in tone, with a narrow band of black near the edge. Around this was a sunken band, curved in section, and colored an olive green. On the edge nearest the panel was a narrow stripe of pink, speckled with bright yellow, which may have been a ground for a gold stripe. Outside of this again was a plain red field.



102. Stucco fragments from debris.  
Scale, 1:2.

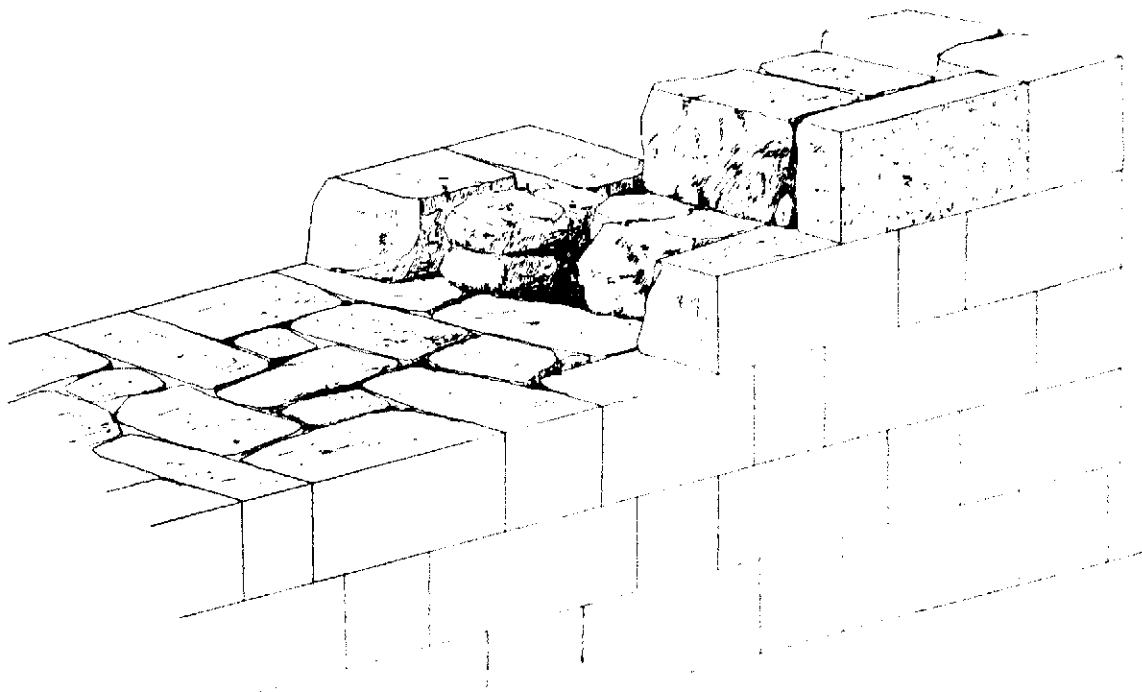
A number of roofing tiles of red-ware were found in the debris, similar to those found in the temple debris and in the Roman Basilica.

#### d. THE TEMPLE OF SEVERUS

During the last Roman period the main temple building was considerably altered in size, although its general shape and character remained the same. A new portico was added, extending 11.2 m. beyond the older one (Pls. 17 b 10; 19 a 10). The staircase was wholly reconstructed, beginning near the altar and extending to the face of the portico (Pls. 17 a and 18 c). The area formerly occupied by the portico became a vestibule, but slightly deepened and narrowed. The north wall of the cella was torn down to the level of the foundation masonry, and a new wall erected 1 m. south of it (Pl. 10 c d 10). The side and rear walls remained the same, so that the interior arrangement of the building must have been, with the exception of the slight shortening, the same as before. The two inner walls were extended into the vestibule, ending in two heavy antæ.

Where the Herodian foundations remained, they were used in the new building, but along the western inner wall several breaks had been made by stone thieves. These were filled up with debris and small stones to the required level, and on this surface the Severan walls were built. At other points, where the changes required wholly new walls, solid masonry was used for the foundations, but it did not usually extend to rock, and had no regular system of bonding and

courses, as in the previous walls. The new cross wall separating the cella and the vestibule in its upper part contained courses of headers alternating with courses of stretchers, as in the Herodian superstructure. This construction is explained by the fact that the wall was erected immediately behind the older one, and the stones from the Herodian wall were laid in the new wall as they were taken from the old (Pl. 10 d 10). They were not fitted, but placed loosely side by side, as this was a foundation only, below the level of the cella floor. The finished superstructure walls of the last period, however, were well built, and present characteristics which distinguish them clearly from the Herodian walls. Fig. 103 gives

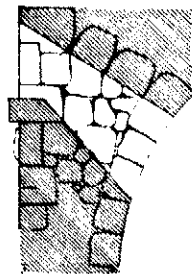


103. Characteristic masonry of the temple of Severus. Scale, 1:40.

a sketch of the facing masonry of the west side of the new portico, and the same face is seen in Pl. 18 e.

The exposed faces were of well fitted stones, laid in courses of alternate headers and stretchers, thus: H-S-H-S-H-, etc. The alternate courses were so laid that the header of one was placed over the stretcher of the other. The faces were chisel-picked, and had uniform marginal dressing. The interior of the wall, as before, consisted of rubble.

The great forecourt continued to be a feature of the temple, as the vaults were lined with ashlar and the vaulting rebuilt. At its northern end a large building was erected, with walls only 70 cm. thick (Pl. 19 b 10). It embraced a long hall, 605 (see Plan 9), with three small chambers, 601-603, opening from it on the north. After the Severan period the smaller vault was used as a stable, and a door and two windows were cut through the north wall (Pl. 22 a). The door sill was 2.2 m. below the court level, so that there must have been an open ramp or passage leading down to it. Inside, a flight of rough steps, built of some of the cut stones from the great staircase, and odd slabs, led down to the floor of the vault, which was now raised ca. 15 cm. above the older floor (Pl. 22 b 11). The steps rested on

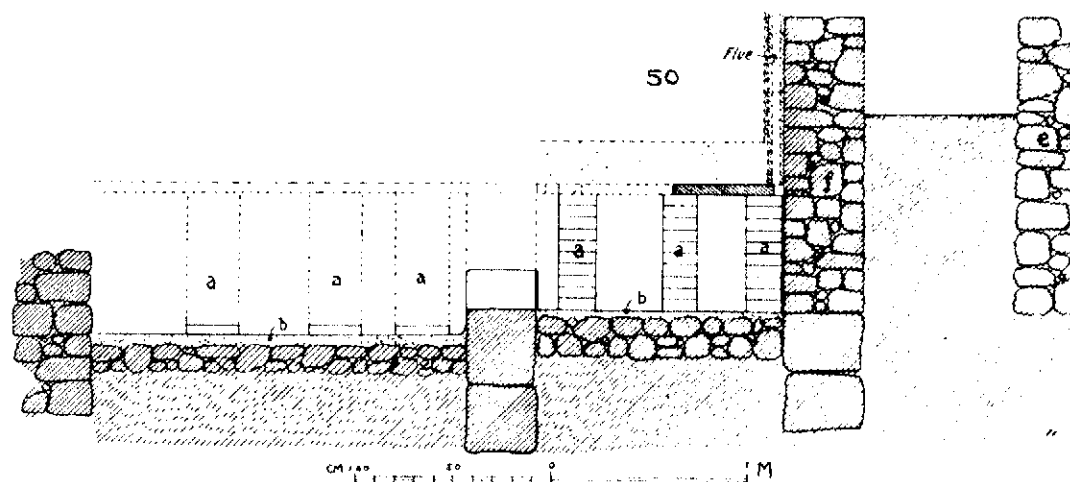


104. Section through east window of temple vault. Scale, 1:100.

rubble and debris, and on either side fragments remained of a buttress wall. In the walls of the vault were cut V-shaped holes for fastening ropes. The two windows were cut through the walls, leaving the rubble core visible on the sides (Fig. 104).

To the west of the temple the streets remained practically the same, although their levels were slightly raised. Over the ruins of the Atrium House a series of irregular houses were built, the characteristic feature of which was a group of large circular vats with ledges, covered all over with gray plaster. On the east a large bath-house was built upon the old foundation walls of the Preherodian buildings (Pl. 2 a). Of this bath-house there remained a part of the mosaic floor of the main room, with two long rectangular basins for bathing. North of the main room was a deep cemented vat with steps (Pl. 4 a). This was built down through the earlier strata, and partly sunk in the rock itself. Near this were the remains of a large furnace for heating the water used in the bath and the calidarium.

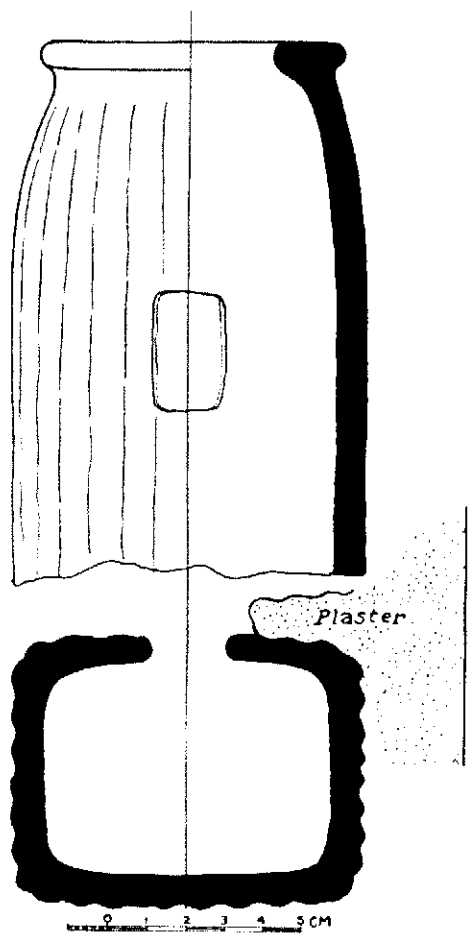
To this period also belonged the reconstructed upper terrace wall south of the temple area, the lower one, which was better built and carried down to rock, belonging to the first period. On the middle terrace, and built against the upper terrace wall, was a small bath-house (Pl. 12 b 10). Of this we have a large room (L. T. 20), a sort of cellar under the main hall of the bath. It was entered from the lower terrace, which here had a large recess. The main floor of the bath was reached from this same terrace by a flight of steps (L. T. 23). At L. T. 26 was a large pool, 4.1 m. in diameter. This was lined with a thin ashlar of limestone, and then plastered. All around it, at a height of 1.15 m. above the floor, was a narrow ledge. To the west of it was the calidarium (L. T. 50), which was well enough preserved to show all its details (Pl. 14 a). It was in two parts, apparently having been enlarged soon after it was built.



105. North to south section through calidarium of bath 50, on Lower Terrace. Scale, 1:100.

The floor below the northern part was first laid with a layer of small stones, 10 cm. to 15 cm. thick (Fig. 105). Over this was a layer of cement (b) mixed with pebbles and a few fragments of charcoal and bits of thin red-ware. Then there was a finishing coat, 4 mm. thick, of greenish-gray plaster. On this bed

were erected twelve piers (a a) arranged in three rows. From marks left in the cement floor it was apparently the original intention to place the north room



106. Flue from calidarium. Scale, 1:4.

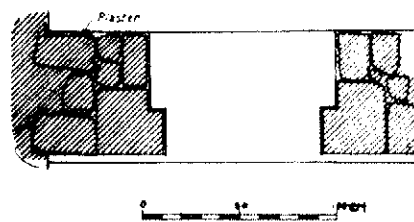
ca. 9 cm. out from the wall, but the room was subsequently built directly against it. The piers consisted each of ten tiles, and were 65 cm. high. The tiles were 19 cm. square and double concave, 4.5 cm. to 4.8 cm. thick at the edges, and 3.8 cm. in the centres. The clay had been mixed with straw, and contained also small pebbles. None of the tiles were stamped, but several had grooves (one with three narrow parallel cuts across the entire face). They were laid in white lime mortar, mixed with fine pebbles, ca. 1.9 cm. thick. On these piers rested a thin floor composed of red terracotta tiles, 58 cm. square and 4.5 cm. thick, so placed as to leave a space between them and the wall. From the debris in the room came a number of fragments of red-ware flues. The flues were 7 cm. by 9 cm. in section, and probably ca. 20 cm. long. At the ends they narrowed slightly (Fig. 106), and had a rim. On one side a hole was pierced.<sup>1</sup> The exterior was ribbed to give a

hold to the plaster of the walls in which they had

been embedded. Several large fragments of this plaster fitting the shape of the flues were also found. The flues were built perpendicularly over the space between the floor tiles and the wall. Above the tiles the floor had been filled with plaster to a depth of 30 cm., the mortar of which still remained on the north wall.

The piers in the outer room were of the same character, but 25 cm. square. The walls of the room had been finally coated with a thin layer of white stucco with incised grooves, to represent stonework. Between this room (L. T. 50) and the basin (L. T. 26) were two circular ovens, lined with pieces of roof tiles and bricks.

A small area to the east of L. T. was cleared (Pl. 52 a). This was designated Lower Terrace East. As its level was 428.58 m., the area formed part of the middle terrace. It was higher than the deep recess in the south face, which was 422.39 m. At the northern end of this strip was a portion of the upper terrace wall, forming the boundary of a court, 506 (see Plan 8), or another recess in line with the lower one. Along the east side of this was a series of rooms, 501, 510, etc. Room 501 had a rabbeted door



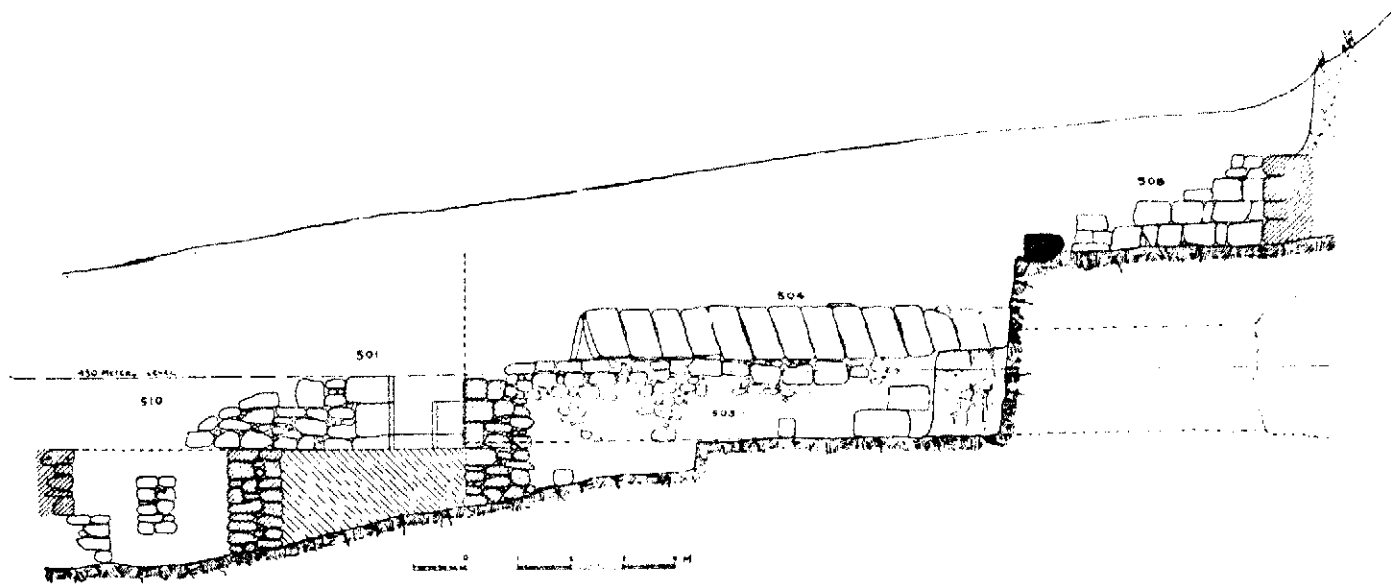
107. Detail of door to room 501. Scale, 1:40.

<sup>1</sup>It was not possible to find pieces of a complete flue, so that there may have been holes on two sides. From their position with respect to the plaster it appears that the holes on two

adjoining flues were placed together to permit a more even circulation of the heated air.



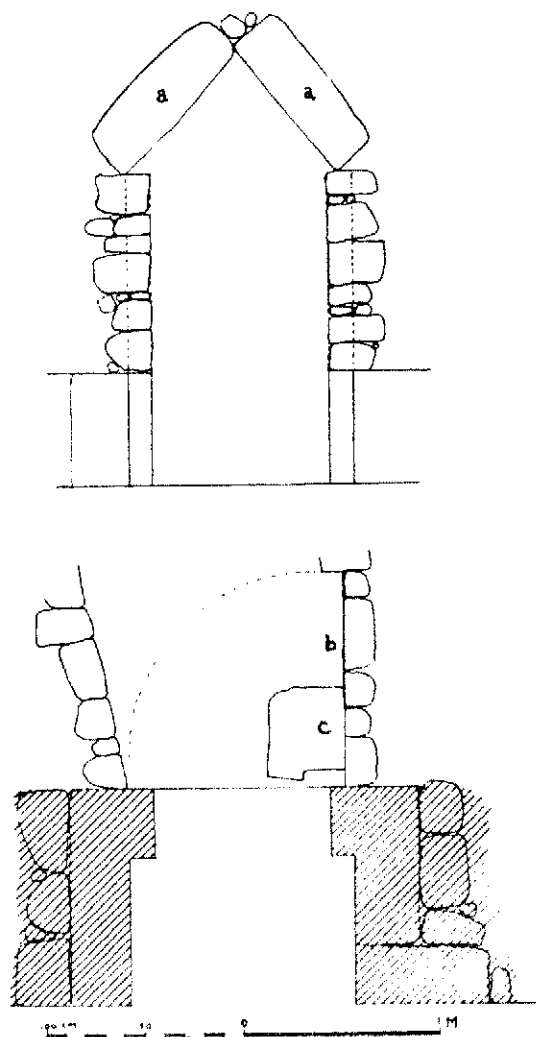
(Fig. 107). The walls were covered with a heavy coat of plaster, which continued around the door jambs. The room had been shortened later by a layer



108. North to south section through L. T. E., showing tunnel to cave. Scale, 1:150.

of masonry built across its east side. In the next room, 510, only the foundations remained, and in the centre was the substructure of a square pier. The east wall was evidently another face of the terrace wall, which turned out towards the south, as its inner face, like the north wall, was irregular and not faced. These walls were perpendicular to the old Omri south scarp, at a distance of 10 m. from it.

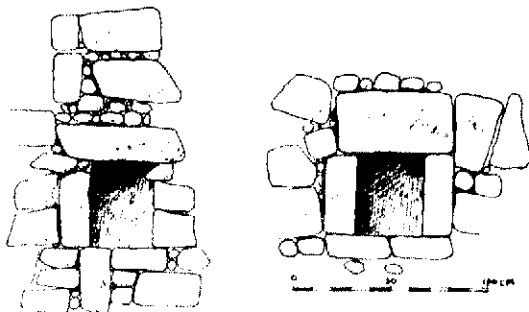
*Tunnel*—From the north side of the court, or recess, of the terrace a door opened into a long tunnel (504) running below the upper terrace (Pl. 52 a). This passage was 1.2 m. wide at the entrance, and widened to 1.39 m. where it reached the scarp, a distance of 9.8 m. from the door. The passage ran in at an angle of  $76^\circ$  with the outer wall, and was evidently built before the terrace was filled in, to connect with a cave which already existed. This cave was ca. 2 m. wide and 6.3 m. long, of oval shape, and lay at the right of the passage, which was cut through the rock for 4.5 m. beyond the scarp. The walls of the passage were of irregular stones, not laid in courses. The door jambs were of large, squared blocks rabbeted, and the east wall was recessed, b, to receive the door when open (Fig. 109). At c was a broken door socket. The passage was covered with two rows of long



109. Detail of entrance to tunnel. Scale, 1:40.

slabs, a a, inclined, resting on the side walls, and meeting at the top (see

also side view of passage in Fig. 108). To the east of the rooms was a rubble wall, 2.57 m. from and parallel to it. In this wall were several square sockets,



110. Sockets in masonry of rubble wall.  
Scale, 1:40.

35 cm. deep, to receive the ends of beams (Fig. 110). They may have formed supports for a passage inside the face of the terrace. The west side was broken away.

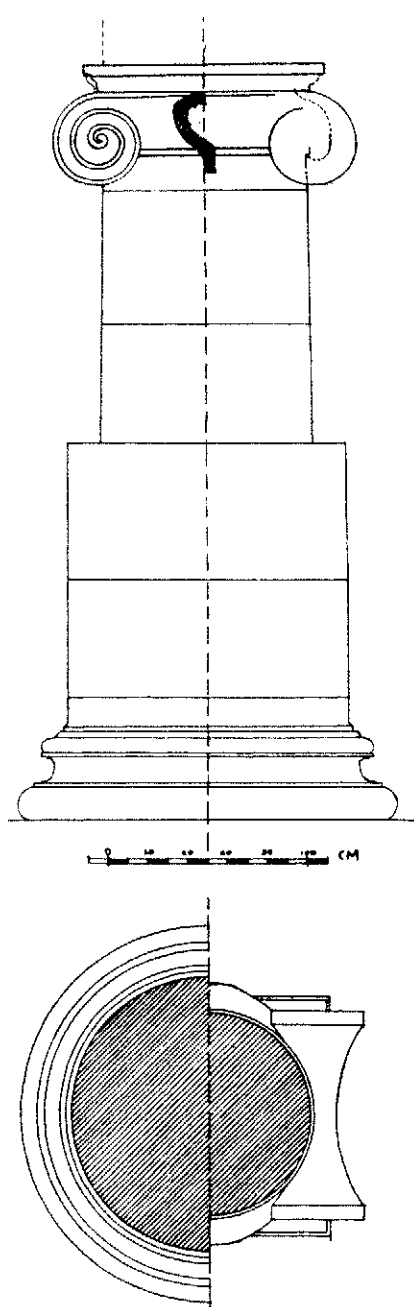
## 2. DETAILS

When the builder of the Severan temple determined upon the reconstruction of the Herodian temple, the latter must already have been in an advanced state of ruin. The alteration in the plan, by which the portico was moved farther to the north, necessitated the removal of whatever remained of the portico, the distinguishing feature of the earlier temple. The final temple was in its turn torn down for its materials during the Byzantine and Arabic periods. As a result of this twofold destruction the details of both buildings were scattered widely. In the house walls of the modern village at the east end of the hill a number of fragments may be seen. This scattering partly accounts for the scarcity of fragments remaining even in the debris on the summit. Furthermore, it is quite possible that, where practicable, the details of the early temple were incorporated with the second. From this confusion it seemed almost hopeless to arrive at any satisfactory conclusion as to the elevations of the two temples. During the early stages of the excavations the only distinctive details found were the large Ionic capitals and several cornice blocks. Towards the close of the season of 1910 some additional details were found, including fragments of volutes and acanthus leaves belonging to large Corinthian capitals, as well as several nearly complete smaller capitals of the same order. Several of these fragments were found to the west of the court, embedded in the upper courses of foundation walls, which were built not earlier than the Herodian period nor later than the Severan. Further excavation showed that the lowest courses of these walls were characteristically Herodian. They must, therefore, have been restored during the later period, and the masonry from the earlier temple used in them. On the other hand, the Ionic capitals were found lying in the debris above the level of the forecourt, and must have been in evidence in the latest building. They were left lying where they had fallen, because, from their shape and immense size, they could neither be readily moved nor advantageously broken up into practicable

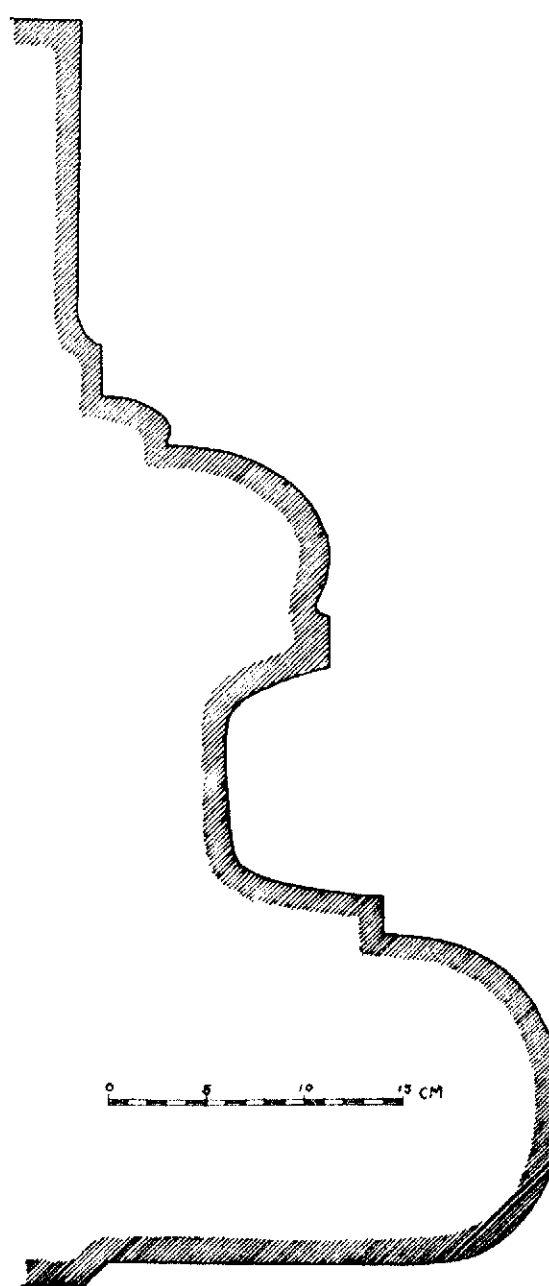
building material (Pl. 19 b). These facts suggest the possibility that the original temple was Corinthian, just as was the Basilica of the same date.

#### a. DESCRIPTION OF FRAGMENTS

Group I. Bases of the regular Attic type. In all, parts of six bases were found, four of them along the north and east sides of the Severan portico, but below their original level. Three had been overturned by stone thieves, in order to get out the slabs beneath them. All moldings were deeply cut and of good projection, like those of the Roadway. All belonged to the Herodian building, and were used again in its later reconstruction (Fig. 111).



111. Order of temple. Scale, 1:40.



112. Contour of Attic base. Scale, 1:4.

1. Base cut from single block of local lime stone. Lower torus, a flattened segment of a circle. Cavetto with characteristic angular contour of the period. Upper torus ovoid, with another smaller flat torus and fillet above it (Contour, Fig. 112). W.,<sup>1</sup> 190 cm.; h., 61 cm. (including 14.5 cm. of shaft); D., 140 cm. Overturned on north portico wall (easternmost of the group of three).

<sup>1</sup>Dimensions are given thus: l. = length of block; w. = width over all; h. = vertical height; p. = projection beyond face of wall; D. = lower diameter; d. = upper diameter.

2. Do. Same size. Overturned on north wall of portico (central base of the group).
3. Do. Broken (westernmost of the group).
4. Do. Moldings on one side broken off. Right side up, on east wall of portico.
5. Moldings, defaced, built into southwest corner of square Arab tower, south of temple.
6. Do. Fragments of volutes. From debris near south wall of temple.

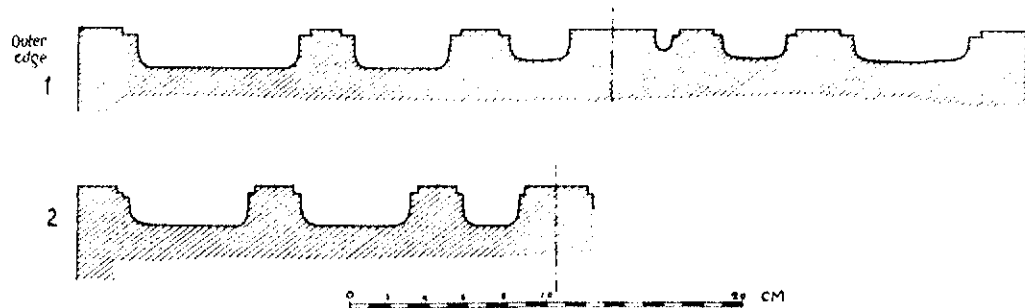
Group II. Shafts. No part of any column was found *in situ*, but scattered over the surface of the summit towards the west of the temple were a number of drums of the same scale as the bases. Several were found in debris of the Temple Vault, and probably had crushed through its roof when the columns were overthrown. The columns were, therefore, not monolithic, as in the Street of Columns and the Basilica.

1. Drum. Square dowels on both top and bottom, and two tongues on sides for lifting. D., 130 cm.; h., 45 cm. Found on the surface.
2. Do. Do. D., 132 cm.; h., 57 cm. In vault debris.
3. Do. Do. D., 130 cm.; h., 55 cm.
4. Do. Dowels only, groove on top. D., 130 cm.; h., 59 cm. From debris on vault floor.
5. Do. Dowels and tongues. D., 129 cm.; h., 70 cm.
6. Do. Dowels only. D., 127 cm.; h., 50 cm.
7. Do. Wide shallow dowels and tongues, 11 cm. high, with groove across face. D., 123.6 cm.; h., 60 cm. From debris in vault.
8. Do. (broken). Dowels only. D., (?); h., 55 cm.
9. Do. (broken). Dowels only. D., (?); h., 70 cm.
10. Do. D., 106 cm.; h., 71 cm. Resting over conduit northeast of staircase.

Group III. Ionic capitals. Several of these were found to the north of the temple, in the debris above the surface stratum of the court (Fig. 111).

1. Capital. Single block, weathered. Traces of egg and dart motive on echinus. Abacus apparently consisted of fillet and cyma reversa. Volute ornamented with fillet (Fig. 113).

W., 169.5 cm. by 105 cm.; h., 63.4 cm. Volute: w., 47 cm.; d., 103 cm. Lying on the modern surface at the north end of the summit.

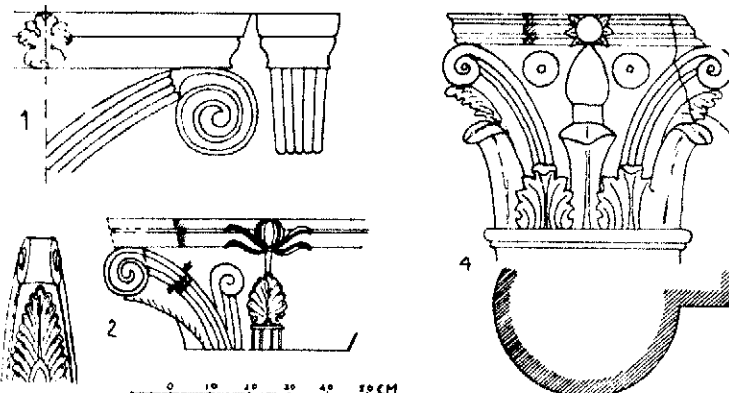


113. Sections through volutes. Scale, 1:4.

2. Do. W., 154 cm.; h., 61 cm. Volute: w., 44.5 cm.; d., ca. 103 cm. In debris north of the altar.
3. Do. Face of volutes cut out, leaving hollow space. W., 160 cm.; h., 52 cm. Volute: w., 43 cm.; d., (?). Lying on modern surface of first terrace below and north of summit. (See Pl. 89 c).

Group IV. Corinthian capitals (Fig. 114), probably of the Herodian period.

1. Fragment, right volute and portion of abacus. Abacus with plain beveled plinth and cyma reversa, rosette in centre. W., 54 cm.; h., 41 cm. From debris in S11, east of square pier.



114. Group IV. Corinthian capitals. Scale, 1:20.

2. Capital made in two horizontal pieces, of which this is the upper. Back unfinished (perhaps meant to be built into wall as pilaster cap?). Abacus beveled and decorated with single deep groove, with pomegranate (?) and leaves in centre. Volute with reeded stem and acanthus leaf below. On axis a pseudo-column surmounted by an acanthus leaf. On either side a smaller volute. W., 42.5 cm. to centre; h., 32.5 cm.; d., 42 cm. Built into restored Roman foundation wall west of court (S11, 23).
3. Fragment of pilaster cap of same size as No. 2. Details not finished. Provenance same as No. 2.
4. Capital of engaged corner column (unfinished). Abacus beveled and ornamented with two parallel grooves, with budding fruit (pomegranate?) in centre. Small volutes, stems reeded. Rough (weathered) acanthus leaves under them. Two rows of leaves, the taller series plain (unfinished). Lower row, well-cut acanthus leaves. On axis above leaf a plain bud. On either side of axis, plain discs. W., 75 cm.; h., 59.5 cm.; d., 47 cm. Built into late wall parallel to west wall of temple.
5. Do. Fragment. Stem of volute with acanthus leaf below it. Built into west foundation wall of Severan portico.

Group V. Friezes. Only four pieces of these were found, three being part of a uniform band, and the fourth a narrower string course or part of door molding (Fig. 115).

1. Slab, with relief ornament of acanthus scrolls, tendrils and flowers, crudely cut and pick-dressed, clearly intended to be covered with a thin stucco. Size: w., 76 cm.; h., 52 cm.; thickness, 20–



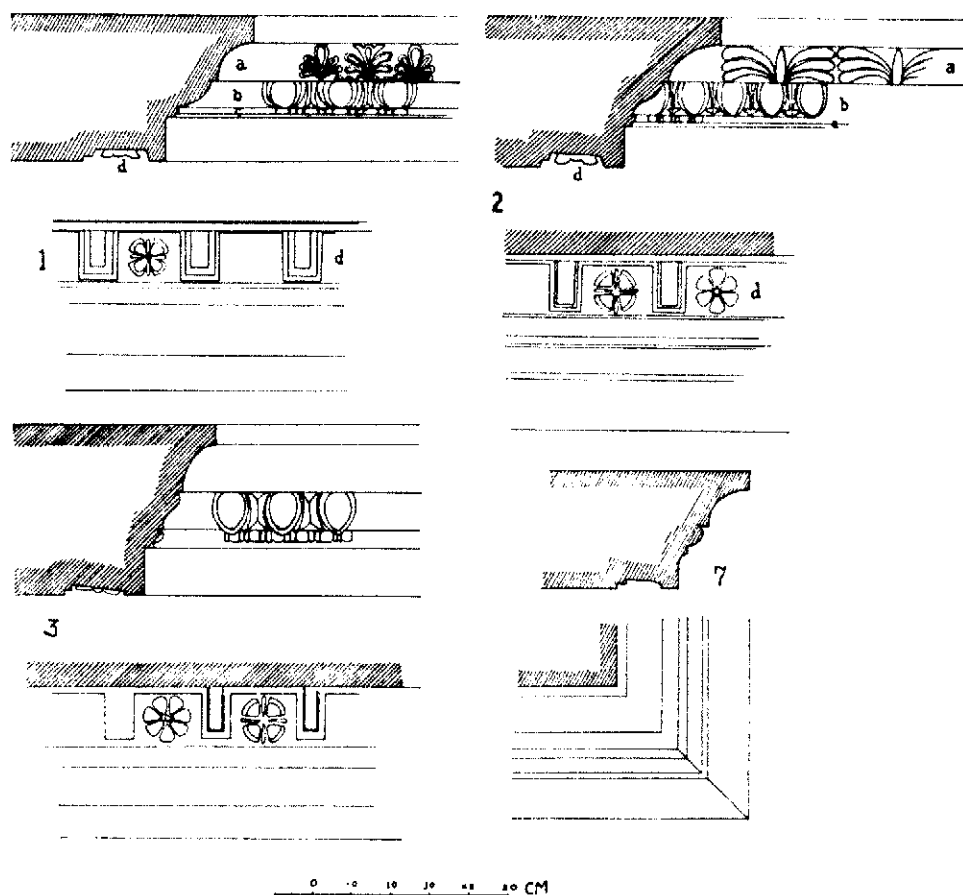
115. Group V. Friezes. Scale, 1:20.

- 30 cm. Built into repaired Roman foundation west of court (S11, 23).
2. Do., modeling somewhat finer, but with same finish. Size: w., 45+ cm.; h., 56 cm.; thickness, 20–30 cm. From debris between west walls of temple.
3. Do. Fragment only. Built into west foundation wall of Severan portico.
4. Band with two rows of egg and dart pattern, one inverted, separated by beaded fillet. W., 52.1 cm.; h., 39.4 cm. From debris near northeast corner of Herodian temple.

Group VI. Cornices. The fragments found were very irregular, no two of them being of equal height or exactly similar contour. They represent various portions of the cornices, i.e., of the main temple and of the side buildings and col-

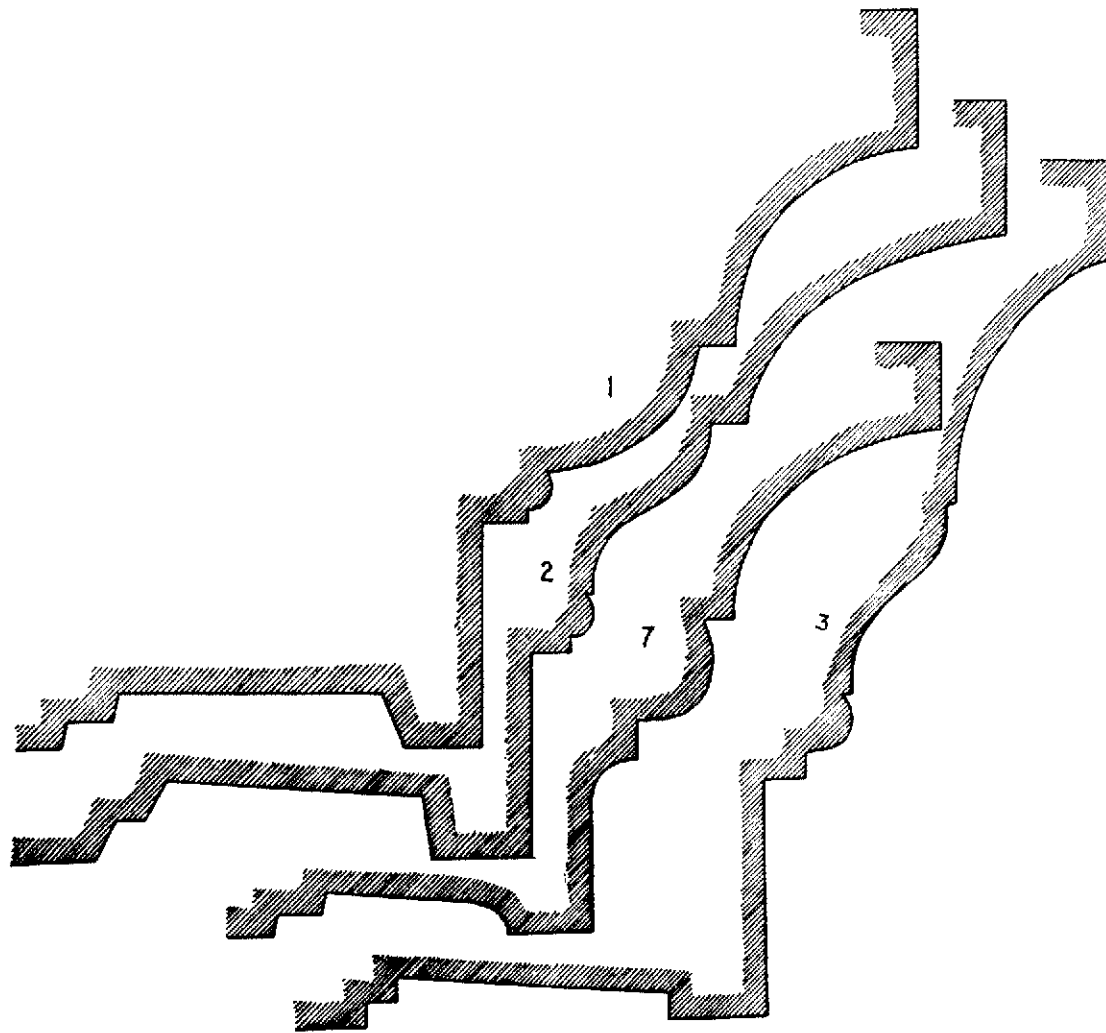
onnades. Without exception the technique was poor, and the surface had been covered with a thin white stucco. Traces of this were still adhering to the surface in the crevices of the relief. All members of the cornices were covered with curved relief ornaments of palmettes, egg and tongue, and bead and reed. These were never evenly spaced nor of equal size, and the ends of the ova nearly always ran down into the bead and reed motive (Fig. 116).

1. Cornice: crowning cavetto (a) decorated with alternate large and small palmettes connected by ribbon. Ovolo (b) with wide egg and tongue pattern. Below, a bead and reed motive (c). Soffit divided into panels by shallow flat modillions (d). Wild rose (?) in panels, probably alternating, as in No. 2. (Contour, No. 1 in Fig. 117.) L., 62 cm.; w., 36+ cm.; h., 37.4 cm.; p., 43 cm. From debris north of S10, 1001.



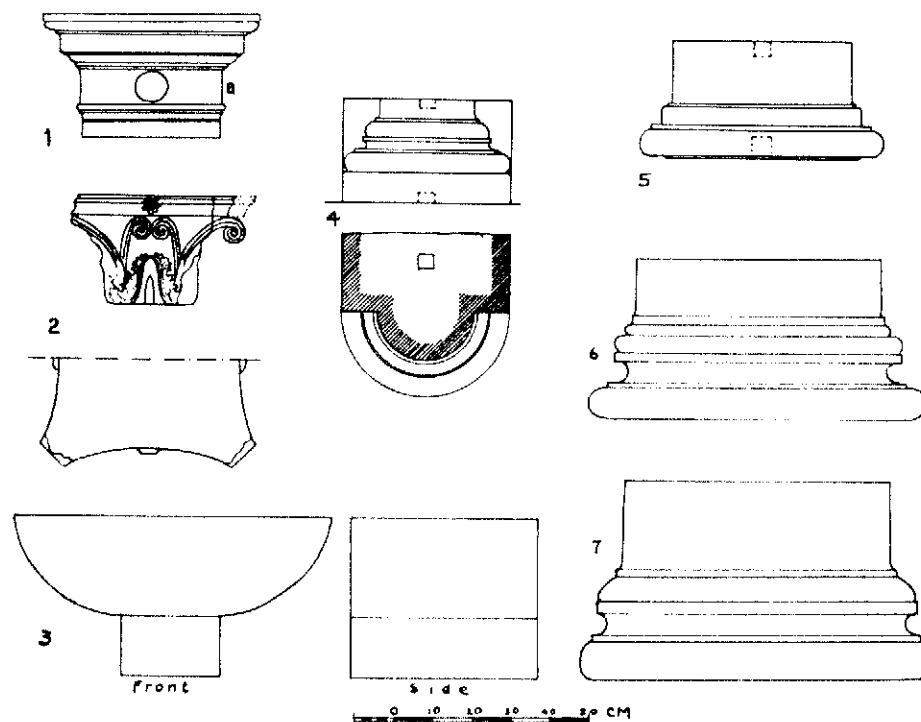
116. Group VI. Cornices. Scale, 1:20.

2. Do. Cavetto (a) with wide-spreading palmettes. Ovolo (b) with eggs and darts. Soffit as in No. 1, with alternate wild rose (?) and six-leaved rosettes. (Contour, No. 2 in Fig. 117.) L., 50+ cm.; w., 40+ cm.; h., 38.2 cm.; p., 45 cm. From debris on floor of long vault.
3. Do. Cavetto weathered. Ovolo with pointed egg and double tongue, the ova running down over bead and reed. Soffit as Nos. 1-2, with alternate wild rose (?) and seven-leaved rosette. (Contour, No. 3 in Fig. 117.) L., 77 cm.; w., 29.7 cm. (broken); h., 44.5 cm.; p., 38.2 cm. From debris over staircase.
4. Do. Similar fragment with eight-leaved rosettes in soffit panels. Same provenance as No. 3.
5. Do. Cavetto with alternate wide-spreading palmette and curled palmette. In soffit panels, alternate six-leaved and seven-leaved rosettes. L., 107.5 cm.; w., 56.5 cm.; h., 34 cm.; p., 38 cm. Same provenance as Nos. 3-4.
6. Do. Cavetto with unsymmetrical palmettes, one half widely spreading; the other, short (top broken away). Ovolo with pointed eggs and double tongue. In soffit panels, alternate four-leaved and six-leaved rosettes. L., 53 cm. (broken); w., 54.5 cm.; h., 32.5 cm.; p., 36 cm. From debris near outer west wall of temple. Several other similar fragments were found in the debris over the staircase in season of 1908.
7. Angle of cornice, plain. L., ca. 50 cm.; w., ca. 50 by 60 cm.; h., 29 cm.; p., 34 cm. (Contour, No. 7 in Fig. 117.) Built into restored Roman foundation west of court (S11, 23 W.).



117. Group VI. Contours of cornices. Scale, 1:4.

Group VII. Miscellaneous capitals and bases of smaller dimensions (Fig. 118).

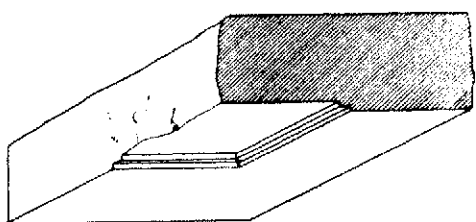


118. Group VII. Miscellaneous details. Scale, 1:20.

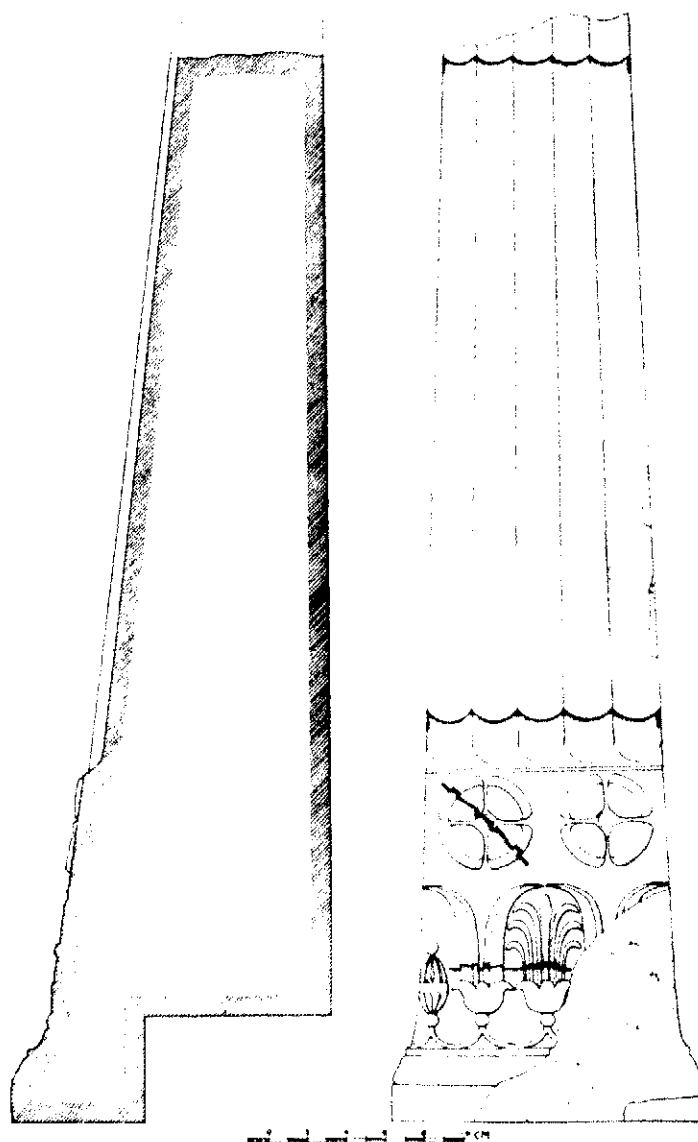
1. Capital. Lower band (a) decorated with ten rosettes. W., 55 cm.; h., 33.5 cm.; d., 35 cm. Built into restored west wall of long subterranean corridor.
2. Corinthian pilaster capital, with rosette on abacus, one row of well-cut acanthus leaves and delicate volutes. W., 55 cm.; h., 27.8 cm.; d., ca. 28 cm. From debris in room 51 of Roman bath on middle south terrace.

3. Capital of square pier, with wide brackets to carry beams. W., 80 cm. by 47.5 cm.; h., 41 cm.; pier, 25 cm. by 47.5 cm. From debris north of altar.
4. Base of small, engaged column, Attic type. Comb-picked and covered with fine, white stucco. Square dowels in top and bottom. W., 43 cm.; h., 26.5 cm.; D., 24 cm. From debris in room 356 of Atrium House.
5. Base of column. Torus and fascia with fillets. Probably comb-picked and then dressed smooth. Square dowels 4 x 4 cm. on top and bottom. W., 62.5 cm.; h., 29.6 cm.; D., 46 cm. Built into late wall erected against west side of temple.
6. Do. Attic type. Comb-picked. W., 87.3 cm.; h., 41.5 cm.; D., 62.5 cm. From debris above west Greek Fort Wall (S10).
7. Do. Upper torus with ovoid curve. W., 90 cm.; h., 51 cm. (including 22.5 cm. of shaft); D., 68 cm. From debris over floor of small vault.  
From the small vault came also a broken Ionic capital of a column (d., 58 cm.) and several drums, 30 cm. to 40 cm. in diameter.

Group VIII. Ceilings. Fragment of ceiling block, paneled. L., 64 cm.; w., 64 cm. (broken); thickness, 25 cm. From debris under pavement of Severan portico (Fig. 119).



119. Group VIII. Ceilings.



120. Ornamental pilaster of fine marble. Scale, 1:4.

Group IX. Miscellaneous carved fragments, not architectural: Altars, etc.

1. Ornamental pilaster of fine marble, cut to fit into a larger structure (Fig. 120). Top broken off. Shaft fluted and lower end decorated with rosettes and lotus (?) buds. W., 15.8 cm.; h., 57+ cm.; p., 16.4 cm. From debris in long subterranean corridor (Reg. No. 4730).



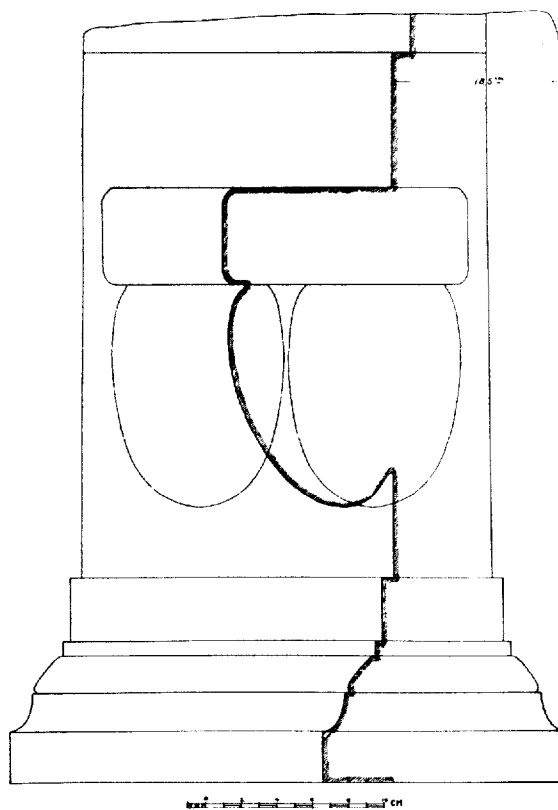
2. Inscribed pedestal, limestone, with molded base and surbase (Fig. 121). Two lines of Greek inscription along dado (see p. 250 III 3). W., 40+ cm.; h., 12.2 cm. From debris in long subterranean corridor, as No. 1 (Reg. No. 4731).

Lime stone.



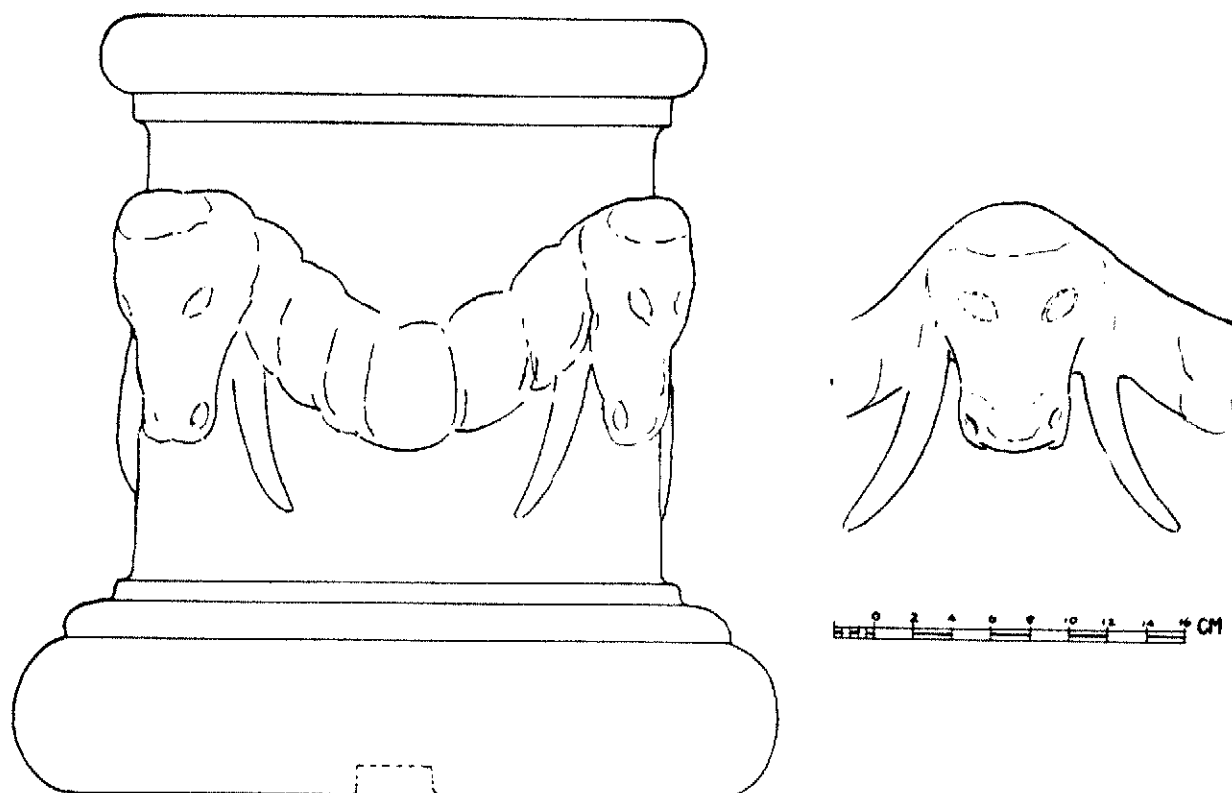
121. Inscribed pedestal. Scale 1:4.

3. Altar, limestone, with molded base (Fig. 122). Top broken. On face, a shelf, 9.5 cm. deep, supported on two large ova. W., 31 cm.; h., 43.2 cm.; p. (exclusive of shelf), 18.5 cm. From debris in room 816 (S8).



122. Altar with bracket. Scale, 1:4.

4. Altar, limestone, circular, with torus and fillet at base and smaller one for surbase (Fig. 123). On sides, three bull heads, connected by garlands. Roughly modeled and much weathered. W., 39.3 cm.; h., 40 cm.; D., 27 cm. From debris below room 349 (S3).



123. Altar with reliefs. Scale, 1:4.

## b. MASONS' MARKS

1. Drum. Mason's mark, F 1111, on bottom, and square dowel holes. D., 44 cm.; h., 55 cm. From debris in Trench F (found by Dr. Schumacher in 1908).
2. Do. Mason's mark, (?) . . . ||| 111. Size: d., 44 cm.; h., 65 cm. Found with No. 1.
3. Do. Mason's mark, B 1111111. Size: d., 52 cm.; h., (?) From debris, Trench A (north of Basilica). (Found by Dr. Schumacher in 1908.)

## 3. THE WEST GATE

In the original Israelite period the axis of the western entrance had been nearly  $69^\circ$  east of north, and this had varied very little in the successive rebuildings of the gate. Through all these periods the outer wall of the town appears to have encircled the hill on a level not far from that of the west gate. During the Herodian period, however, the city wall was rebuilt on an entirely new plan, and, as far as our examination revealed, without any reference to the previous remains except at the west gate. The wall was extended to enclose a vastly increased area (see Plan 1). The area south of the summit cliff was cleared to permit the leveling of the rock, and a magnificent roadway with colonnades was constructed along the bottom of the cliff eastwards as far as the Forum. This street ran directly to the west gate, which still remained apparently the main entrance of the city. Here a monumental entrance was planned, and, in order to connect this effectively with the new street, it was placed perpendicular to the latter, so that its axis became  $18^\circ 15'$  south of east, the same as the axis of the western part of the street. Owing to the conformation of the rock surface, it was found impracticable to build the two towers which defended the gate on either side perpendicular to this axis. They were accordingly built essentially on the old axis, or line joining their centres,

with a magnetic bearing of  $20^{\circ} 45'$  west of north, and the main body of the new gateway was fitted in between them (Plan 10 for the plan of the gateway, and Pl. 45 a for photograph).

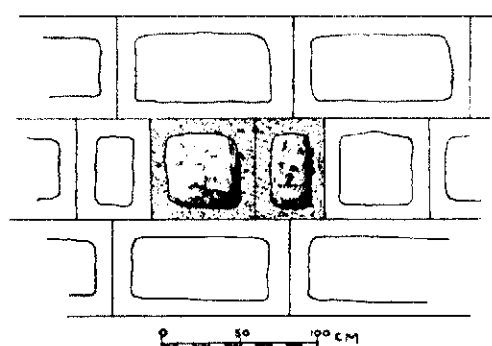
Before the excavations began, the only evidence of the entrance was two low mounds on the slope of the hill, with fragments of curved faces of much weathered masonry protruding from them (Pl. 42 a). Between these two in Pl. 42 b is shown the condition of the gateway after the close of excavations in 1910. The modern roadway occupied approximately the same position as the Roman roadway which lay below it. The two walls of rubble on either side of the road and the new surfacing of the roadway itself (Pl. 42 b) were made by the expedition, in order to preserve to the village its thoroughfare. The rubble walls rest immediately upon the original rock ramp, which can be seen below them. The paved Roman ramp was ca. 1 m. above this, with a layer of debris underneath.

*Plan* — The west entrance consisted of two round towers, 12 m. in diameter, placed 13.2 m. apart. Between them was a mass of masonry, rectangular in plan, with its outer face decorated with pilasters. Between these in the centre was placed a single opening, ca. 5.5 m. wide, probably arched. A plinth or surbase of varying width extended under the whole of the main face. Above this were plain block pedestals, on which rested the well-modeled bases of the pilasters. The upper portion of the gateway was entirely destroyed, but from the fragments of moldings, both straight and curved, with bases of antæ, and small columns, found in the debris, it is clear that the gate was very elaborate in design. From the north tower the wall ran  $33^{\circ} 15'$  west of north (Pl. 43 a 10) for a distance of 53 m., where there was another round tower, 11 m. in diameter. Beyond this the wall extended  $13^{\circ} 50'$  west of north for an indefinite distance. It was not excavated more than a few metres beyond the angle tower. The wall on the southern side of the gate has not been excavated. It probably followed the line of the steep modern terrace, which runs southeast.

*Construction* — In erecting the wall, the towers were located and built first, and the main wall then built between and around them as a curtain wall, but not bonded into them. The three towers which have been thus far excavated are of the Herodian period, the masonry corresponding to that in the Basilica and the great temple on the summit. The existing curtain walls, on the other hand, were built like the later Severan temple walls, but rested for the greater part on the characteristic Herodian foundations. The superstructure therefore of the original Herodian curtain walls had been destroyed and completely rebuilt in the later period. The towers were carried down to rock or to solid masonry. In the case of the north gate-tower this masonry is the remains of the massive square tower of the Hellenistic period.

*Corner Tower* — The outer, corner tower was the best example of the construction, as it was wholly of the Herodian period, and had, at least in the portion still standing, no restorations. It was still *in situ* to a height of 6.84 m. on its southwest side and 1.32 m. more than this on its inner edge. The tower was broken off in line with the sloping surface of the modern terrace, so that only six

courses were *in situ* on the outer (southwest) side, and ten on the inner side. The rock surface at the outer side of the tower was 379.86 m. above sea-level, or 11.24 m. below the level of the entrance, and sloped up towards the inside. As no rock trenches were cut to receive the footings, a foundation of rough unfitted stones was first constructed to level up this surface. On the outer side this was 50 cm. deep and had three courses, while on the inner side it consisted of only a single course. The lowest course of the regular masonry was composed of headers only. The succeeding courses were laid as courses of stretchers, S-S-S-S-S-S, and headers, H-H-H-H-H-H, alternately, but never were headers and stretchers mixed in any course. The courses were 60, 60, 61, 61, 65, and 75 cm. high from the



124. Detail of masonry in the outer tower.

bottom up, but did not extend quite uniformly around the tower. Where a change in height took place, the stones were cut with a slight rabbet to compensate for the change in level. Great care was taken to secure a perfect and regular breaking of joints. The stones in the stretcher courses were with slight variations 1.13 m. long, and the headers, while not all of the same width, were placed so that two always equaled this length (Fig. 124). They all had a heavy, rough boss,

with a comb-picked margin on all four edges. The fitting was only on the exterior, and the sides tapered toward the inside of the tower. The interior of the tower was composed of a mass of large rough stones with smaller stones filling all the crevices.

*City Wall* — The city wall, at the junction with the angle tower, into which, as has been said, it did not bond, had a foundation 1.95 m. deep. The upper courses of the wall were lower than those of the tower, being 50, 60, 50, 50, 50, 53, 50, and 47 cm., respectively, from bottom to top. They were laid as in the Severan temple walls, i.e., with each course of alternate headers and stretchers, thus, H-S-H-S-H-S. Near the north gate-tower the courses were neither so regular nor uniform, and had the appearance of having been carelessly rebuilt at some time. The bottom line of the foundation sloped down towards the angle tower, while the roughly finished masonry in the upper part of the wall apparently followed the sloping surface of the debris as it existed at the time when the wall was rebuilt (Pls. 43 a 10; 44 c 10). The wall was 3.2 m. thick, with the usual core of rubble. At the angle tower it was built as shown in Plan 10. The outer face of the wall was built against the tower, covering about a quarter of its circumference. The inner face also was curved, but in the opposite direction. The wall proper was thus narrowed to 97 cm. at its narrowest point. It was later re-enforced with four courses of rough masonry, 1.40 m. thick at the widest part. At the north gate the outer line of the wall ended against the tower, while the inner line was carried around as a curve, roughly approximating the curvature of the tower itself. Where the wall ended, at the face of the masonry of the gate, it had narrowed to 1.58 m. in thickness. The end was not bonded into the gate,

but was irregular, as if it had been built against the side of the square entrance-building at a time subsequent to the erection of the latter.

*North gate-tower* — The north gate-tower was built upon the remains of the square Hellenistic tower, of which four courses, rising to a height of 2.11 m., remained *in situ* (Pls. 42 b; 44 b). The new tower did not have exactly the same centre as these remains. Its western face was flush with the face of the foundation, but the northern face was set back 1.4 m. from the edge, and the southern face against the rock ramp 40 cm. The top of the earlier masonry was 45 cm. higher where it disappeared under the Roman wall than at its outer face, so that the lower course of the tower masonry was sunk into it (Pl. 45 b). The outer portion of the original round tower had been overthrown by an earthquake during the early part of the Herodian period, and had been rebuilt soon afterwards. The masonry throughout was Herodian, but there was a distinct break in the face of the tower, and the offsets and diameter of the inner older part do not correspond to the later portion (Pl. 45 a, and Fig. 125 on p. 203). The upper part was again restored during the Severan period. The enormous weight of the round tower had caused it to crush down through the square foundation at the middle of the west face to a depth of 10 cm., and this resulted in a crack in the masonry extending irregularly above this point to the top (Pl. 45 b, and elevation, Plan 11, AB). On the west side seven courses were *in situ*, while on the south and the north side, where the slope of the debris had preserved them, there were eleven. On the inner (eastern) side several additional courses of a later restoration remained *in situ*.

The three lower courses were respectively 56, 55, and 54 cm. high from the bottom up, and their faces were flush. The lowest course was composed wholly of headers, the second of stretchers, and the third of headers. The fourth course, 54.5 cm. high, was of stretchers set back 4.5 cm. from the three courses below it. The fifth course was flush with the fourth, and composed of headers 57 cm. high. The sixth course, of stretchers, was 54.5 cm. high, and set back 2 cm. The seventh was a course of headers, 52 cm. high, and set back 6.5 cm. This was the last of the Herodian courses remaining at this point, the next course being of mixed headers and stretchers 90 cm. high, flush with the course below it. On the side towards the ramp this course had been repaired with headers only. On this side were parts of two more courses. The lower was 56 cm. high and had traces of a badly weathered base molding, occupying the upper half. The course above was set back 20 cm., and was 90 cm. high.

In the lower portion of the tower, where it was built with the regular courses of headers and stretchers, the faces of the stones had the bosses worked off with a chisel, and all the stones had comb-picked margins. There was no standard size of comb-pick used at this period (Herodian). Some of the stones had been dressed with a tool having 15 teeth to a width of 3 cm., while others in the same course had 12 and 13 to the same width. Here, as in the Israelite period, the rough bossing and marginal dressing were purely for constructional purposes, and not ornamental. The rough boss was the condition of the stone as it came

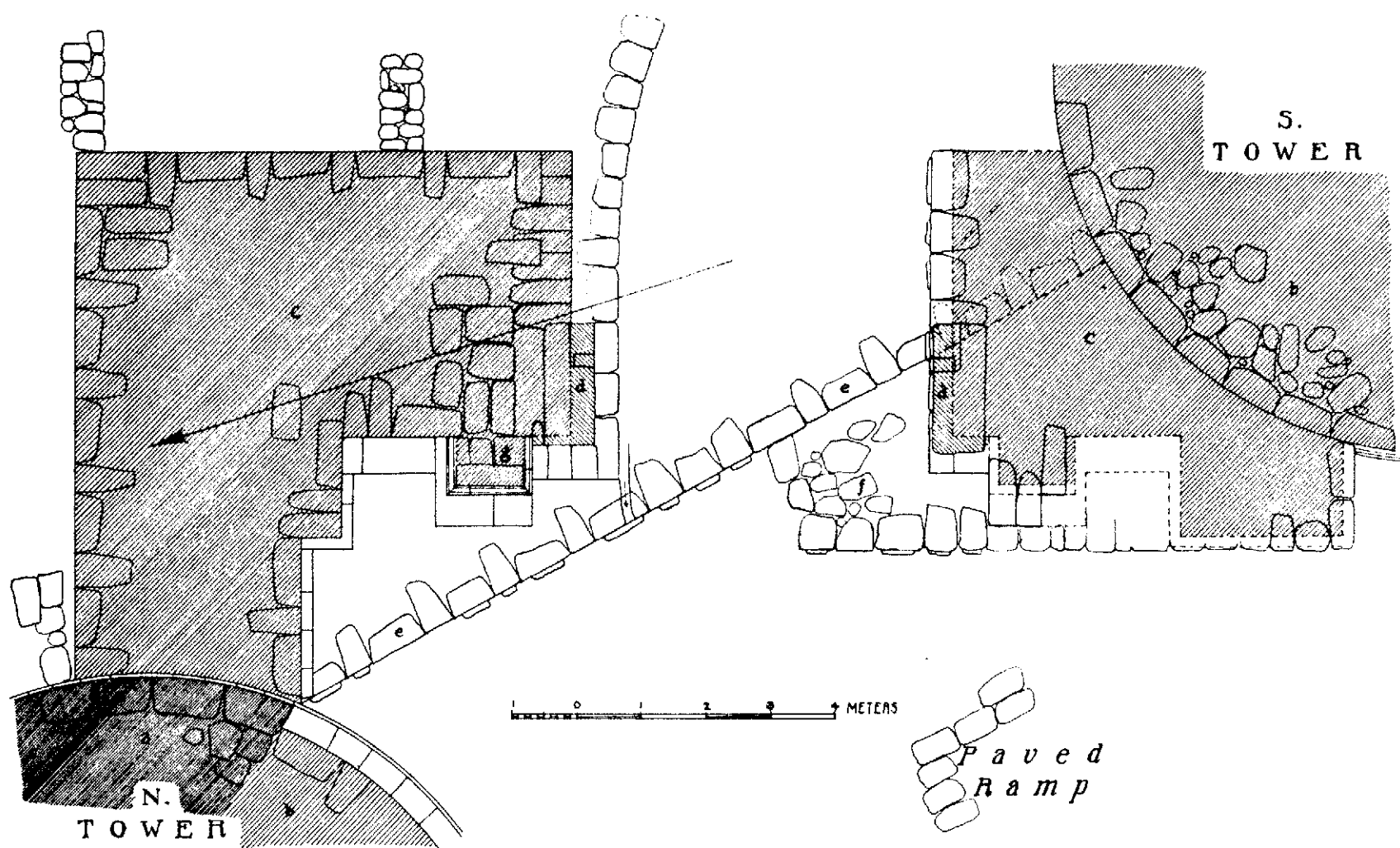
from the quarry, and the narrow margins were dressed off so that a more accurate joint could be made between the stones. In the outer angle tower the bosses were never removed, probably because the tower was not considered prominent enough to warrant the labor. In the two gate-towers, on the other hand, where the towers formed an important feature of the entrance, it was necessary to finish off the masonry to correspond to that of the gateway itself. Even here in the lower courses, which were probably below the surface of the ground, several stones (Pls. 45 b; 46 a) had been left with the boss. Others were in various stages of completion, some having the face partly cut down and some being finished off even with the bossing by means of a chisel. In the seventh course from the bottom many of the stones had not a comb-picked margin, but were chisel-dressed all over.

In line with the face of the masonry of the entrance was the break (Pl. 45 a, shown by a dotted line on Plan 10) between the original work and the rebuilt portion of the tower. The eleven original courses, counting from the square foundation, were laid in the regular Herodian system of alternate courses of stretchers and headers. Above them were three deep courses, the lowest 110 cm. and the others 92 cm., all laid with alternate headers and stretchers in each course. Most of the surface of these was much weathered, but, where best preserved, narrow, irregular margins 6-8 cm. wide could be traced. These were chiseled and not comb-picked. While this upper masonry was like that of the upper restored portion of the outer face, it was built in line with the lower masonry and not with the course above the molding. The latter was therefore of even later date than the restoration.

*South gate-tower* — The south tower was 12 m. in diameter, and its centre was 25.1 m. from that of the north tower (Pl. 46 a 9). The space between them at the level of the gateway was 13.1 m. If an earlier square tower, similar to that below the north tower, had stood here, it was either destroyed before the Roman period or did not occupy the exact position desired by the Herodian builders, and was therefore removed by them. An excavation ca. 90 cm. wider all around than the proposed tower, to allow space for the masons to work setting the blocks in position and dressing them, was first made down to the rock surface. After the tower was completed this space was filled in with debris and earth, so that it formed a distinct vertical stratum differing in color and composition from the debris through which it had been sunk. This construction trench could be clearly traced as high as the middle of the seventh course, so that the surface of debris existed to that height, at least, when the tower was built (Pls. 42 b; 46 a, and elevation in Plan 11, AB). The tower was built on a foundation of large, rough stones, not fitted, but laid in courses and with broken joints (Pls. 42 b; 46 a). This foundation was three courses high, and its top was 29 cm. above the top of the square foundation of the north tower. It was evidently erected during the Herodian period, to provide a foundation like the one they found *in situ*.

On the outer face of the tower ten courses were *in situ*, and on the inner side three additional courses. The masonry was like that of the other tower, except that the face had not been dressed down so much as the face of that

tower had been. Many of the stones, even in the upper courses, had the bosses still on them, while on others the bosses were partially removed. The lowest course was of headers 55 cm. high, with roughly chiseled faces and irregular margins. The next four courses were flush with one another, but set back 2.5 cm. from the lowest course. They were laid as entire courses alternately, the heights being from top to bottom 59, 56, 56, and 53 cm. The stones all had



125. Plan of central feature of gateway. Scale, 1:100.

comb-picked margins and chisel-dressed centres, where the dressing had been completed. On a few stones, where the bosses were still left, the margins appeared to be cut by chisel. The sixth course was set back 4 cm., and was 60 cm. high, and the seventh, of equal height, was flush with it. Above these were three courses, 72, 72, and 76 cm., respectively, in height, set back 4 cm., and also laid as uniform courses of either headers or stretchers. They had picked centres and chisel-dressed margins. Over the face were fragments of a thick layer of gray cement. These three courses were also stained with fire and smoke, but below the offset traces of neither cement nor smoke could be detected.

*Tower rooms* — In the masonry of the upper part of each tower were four small square rooms. In the north tower the floor-level of these was 393.58 m., or 2.48 m. above the level of the entrance. Only the east side of one room was *in situ* here, showing the room to have been 1.5 m. wide, and like those in the oppo-

site tower, square. The rooms were built in the rough rubble composing the core of the towers, and were coated with gray plaster. In the south tower the floor-level was ca. 60 cm. higher, and the central masonry with the intersections of the division walls of the four rooms was *in situ*. Both groups of rooms were parallel, but not orientated like either the axis of the tower or the axis of the entrance. They had no doors and no connection with the exterior faces of the towers, and must have been only cellars (or cells for prisoners) below larger apartments in the tops of the towers. The approach to these apartments must have been by exterior staircases either from the top of the walls or from the inner gateway.

The entrance had the same plan as the original Herodian gate, but had been rebuilt by Severus. The south side may have been rebuilt at still another later period. The two large blocks containing the socket holes for the closing bars were not in their original positions, although they doubtless formed part of the first structure (Fig. 125).

*Screen wall* — Reduced to its simplest plan, the gateway consisted of nothing more than a pierced screen wall joining the two entrance towers. Owing to the change in the axis, this wall could not be built directly across between them, but had to be built in an L-shape. The shorter arm, which was 3.5 m. thick, ran southeasterly 8.15 m. from the north tower, nearly in line with its centre. The longer arm, in which was the entrance, was 15.2 m. long and 4.4 m. thick, and was at right angles to the shorter. Its outer face was a tangent to the west face of the south tower. The interior face of the gateway wall, so far as could be ascertained, was finished without any offsets or ornamentation. The exterior face was decorated with pilasters. The centre of the opening was 10.6 m. from the interior face of the short arm. During the final period the opening was 5.2 m. wide, but it seems, judging from the traces of masonry, to have been originally somewhat wider. At the outer face the jamb was rabbeted on either side. The rabbet was 1.85 m. wide and ca. 35 cm. deep.

Near the bottom of each jamb a single large block, the width of the offset, 1.85 m. long and 79 cm. wide, was built into the masonry (see large white blocks on either side of roadway in Pl. 45 a 10). Its projection was 46 cm. On the tops were cut channels (a), 10 cm. deep and 46 cm. wide, extending along the exposed edge for a length of 67 cm. from the inner end of the offset. The side of the channel was in line with the inner face of the jamb. At the inner (west) end of this channel was a socket (b) 40 by 19 cm., and 7 cm. deep. This was used for fastening the gate when closed. The ends of a long wooden bar (c) could be slid into the groove on either side of the gate and dropped into place in the sockets, whence they could be lifted only from the inside.

The pilasters, of which only the north one is *in situ*, were 1.1 m. from the sides of the opening, and were 1.03 m. wide. They projected 74 cm., and had gracefully proportioned and well-cut bases (Fig. 126 b), 30 cm. high, which rested on plain, square pedestals (c), 67.5 cm. high. Only a single stone (a) of the shaft itself was *in situ*, 46 cm. high. The molded base projected on the front and right sides 13.5 cm. and on the left 14 cm. There were no



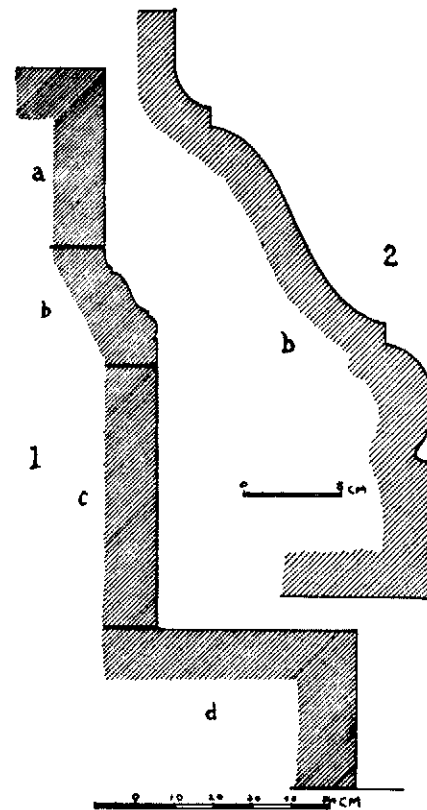
other traces of molded bases on the façade. A space 1.72 m. wide separated the pilaster from the face of an offset, 1.56 m. by 60 cm., which occupied the angle formed by the union of the two arms of the wall. Under the whole of the exterior façade the lowest course, 41 cm. high, projected as a plinth block. The projection was unequal on the different faces, being 16 to 17 cm. along the shorter arm, while below the pilaster and in the space between the pilaster and the angle it was respectively 51 and 56 cm. On the side of the pilaster nearest the gateway there was no projection, the lower course being flush with the face of the pedestal.

Of the south side of the gateway only a few stones were *in situ*, but enough remained to indicate that this was symmetrical with the north side. The offset in the angle of the wall on the north side became on the south side a buttress or corner pilaster, projecting beyond the face of the tower. The north side of the gate was built upon the earlier diagonal wall connecting the two towers, but it was necessary to build on the south side an addition in order to support the structure. This addition was made of rough masonry containing many used stones from earlier work, some with and some without bosses and margins. It rested upon the rock ramp, and extended down over the edge of the ramp to the rock surface below the south tower. The lower part was carelessly built of stones, apparently laid loosely in a trench.

During the later reconstruction of the gate the opening was narrowed by building additions against the jambs (Plan 10, and Fig. 125).

*Houses near gateway* — Inside the various lines of walls, and at a level from 2.25 m. to 3 m. above the entrance level, were two groups of houses superimposed one above the other (Pl. 45 a, upper right-hand corner). The lower of these groups, according to coins and other objects found above and below the floors, belonged to a period not earlier than the Herodian, while the upper belonged to the Severan or the Byzantine period. Along the west of the group ran a street (1), with a stone-covered conduit extending diagonally across its southern end from rooms, now destroyed, south of the group. (See Plan 10.) The street was 3.3 m. wide, but narrowed towards the north, and its western boundary wall was 1.2 m. thick.

The rooms formed no definite house-plan. Room 9 of the earlier series was paved with plain white mosaic, and on the northeast corner was a bench or ledge, also in mosaic. The vat with steps in the adjoining room (2) belonged to this period. The walls of all these rooms were of small rubble, laid in mud mortar. The later series of walls were built to some extent upon the earlier walls (Plan 11, section C-D), and likewise consisted of rubble, the floor-level being ca. 1 m.

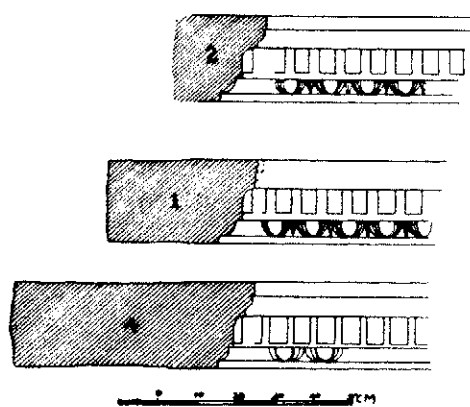


126. Pilaster at gateway. 1. Base and plinth. Scale, 1:20. 2. Contour of base molding. Scale, 1:4.

higher. Rooms 2 and 3 of this period were connected by a door, with rabbeted jambs of large dressed blocks. In room 8 was a cistern (No. 2) with a square curb. In a mass of masonry between 5 and 6 was cistern No. 1, with a circular mouth. Both of these were of the common bottle variety. In several of the rooms were the round *tannûrs*, or ovens, of coarse brown ware.

Farther north and outside the west wall of the street, as well as ca. 3 m. below it, were the remains of a long narrow structure divided by a wall into a small room at the north end and a long chamber at the south. The latter was plastered throughout, and was subdivided into four nearly equal parts by thin walls, which were broken off at a distance of ca. 30 cm. from the outer wall. The plastered face of the opposite wall had no such divisions, which shows that the thin walls did not close off entirely the individual rooms. In the northwest corner of the long chamber were three curved steps, likewise plastered. In the adjoining corner of the small chamber was a plastered rectangular bench. From its shape and character, the building appears to have been a bath.

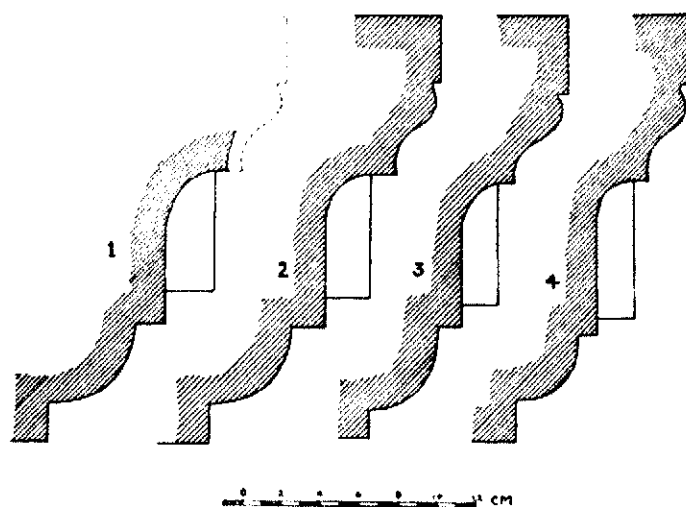
*Details* — With the exception of the base of the north pilaster and the frag-



127. Cornices from gateway. Scale, 1:20.

ment of weathered molding on the north tower, no details were found *in situ*. From the debris, however, came several straight or curved pieces of cornices and of columns, which from their size could have belonged only to the gate structure. There were also in the debris inside the gate and in the houses near it bases of two antæ and a fragment of a small capital which may have belonged to an elaborate decoration of the upper portion of the gate entrance. A list of these fragments follows:

1. Fragment of straight cornice, upper member broken away. Like Nos. 2 to 4 following, the fragment consisted of a cyma reversa and a row of dentils, with an egg and tongue motive below them. They were, therefore, probably part of the original Herodian entrance. Height, 21 cm.; width, 57 cm.; length,<sup>1</sup> 29 cm.; projection,<sup>1</sup> 8.5+ cm. The dentils were 4 cm. wide and 2.4 to 2.7 cm. apart. The ova were 9.5 cm. on centres (Fig. 127, No. 1. Contour, Fig. 128, No. 1). In contrast to the details from the Severan temple, fragments 1, 2, and 4 were well proportioned and regularly cut.

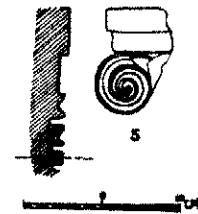


128. Contours of cornices from gateway. Scale, 1:4.

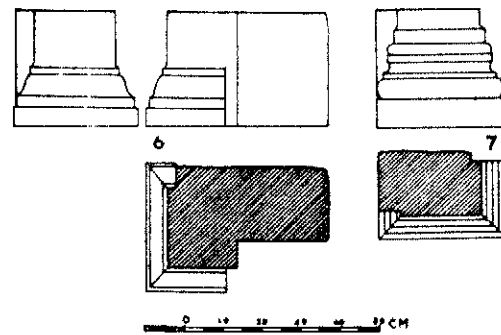
<sup>1</sup>The length is always taken from the face of the lowest member to the inner end of the block, and represents approximately the length built into the wall. The projection is the difference between the faces of the upper and lower members.

As the lowest member usually projected a distance equal to its height, the actual length built into the wall would be less, and the actual projection more, than the figures given.

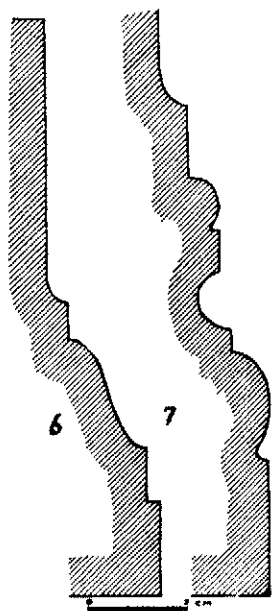
2. Do. Height, 22 cm.; width, 50.4 cm.; length, broken; projection, 11.8 cm. (Fig. 127, No. 2. Contour, Fig. 128, No. 2).
3. Do. Height, 21.4 cm.; width and length, uncertain; projection, 10.2 cm. (Contour, Fig. 128, No. 3).
4. Do., cut to radius for tower. Similar to Nos. 1-3, but without tongues or darts between ova. Height, 21.3 cm.; width, 37.5 cm. on face, tapering to 28 cm. at inner end; length, 58.5 cm.; projection, 9 cm. (Fig. 127, No. 4. Contour, Fig. 128, No. 4).
5. Fragment of small Corinthian capital. Volute and abacus only. Abacus consisted of two simple faces. Faces of spiral broad and concave, and separated by deep narrow groove. Height of abacus, 5.6 cm. Diameter of volute, 7.2 cm. (Fig. 129).
6. Base of small corner pilaster with simple cyma and fillet. Height, 29.5 cm.; width of pilaster, 20.5 cm.; projection on left, 2 cm.; on right, 17.5 cm.; base, 31.8 by 20.2 cm. (Fig. 130, No. 6. Contour, Fig. 131, No. 6).
7. Fragment of Attic type. Height, 29.5 cm.; width of pilaster, 21.1 cm.; projection on left, 1.5 cm.; on right, 14 cm.; base, 32.4 by 19.5 cm. (Fig. 130, No. 7. Contour, Fig. 131, 7).
8. Lower end of column (monolithic). Length, 1.38+ m.; diameter at upper (broken) end, 60.5 cm.; fillet around bottom, 6 cm. deep, with projection of 4 cm.
9. Fragment of column. Length, 1.365 m.; diameter at lower end, 59 cm.; at upper end, 57.8 cm.
10. Drum of column. Length, 60.7 cm.; diameter, 61 cm.



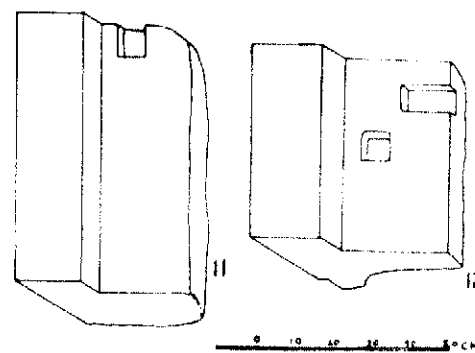
129. Fragment of Corinthian capital from gateway. Scale, 1 : 10; scale of section, 1 : 5.



130. Bases of antæ from gateway. Scale, 1:20.



131. Contours of bases 6-7. Scale, 1:4.

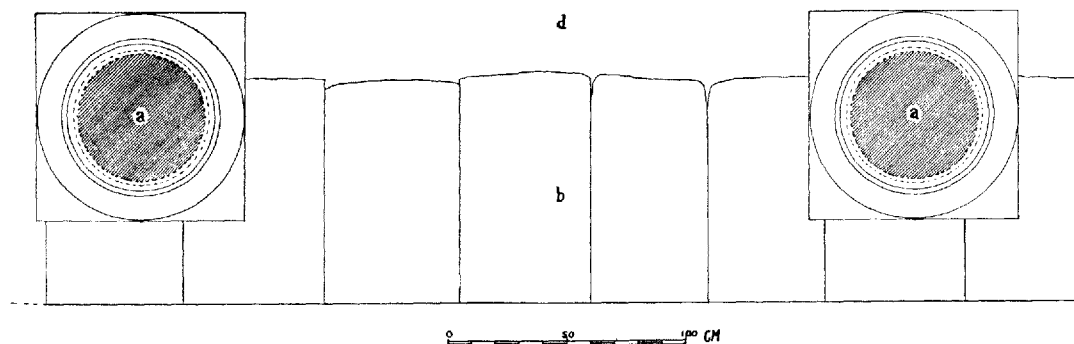


132. Fragments of door-jambs. Scale, 1:20.

11. Piece of rabbeted door-jamb, with socket for fastening bar. Height, 49.5 cm.; face of jamb, 17 cm.; rabbet, 5.2 cm. deep, and of uncertain width (Fig. 132).
12. Do., with two socket holes for door fastenings. Height, 42 cm.; face of jamb, 17.8 cm.; rabbet, 6.7 cm. deep and 27 cm. wide (Fig. 132).

## 4. THE STREET OF COLUMNS

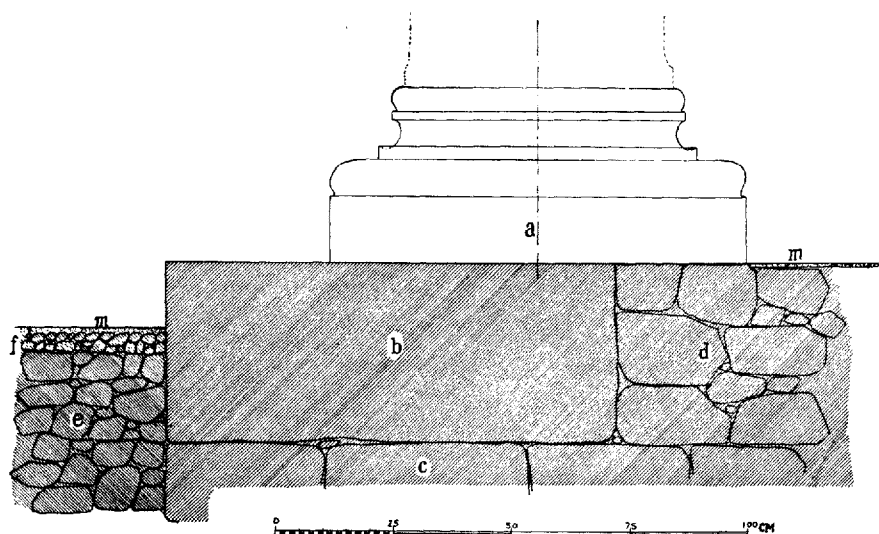
The long rows of columns appearing above the surface at intervals along the whole south side of the hill have always been a feature of the site. They were rightly supposed to form part of the great colonnaded street built by Herod, which ran on a gradual upward slope along the southern side of the hill, passed around the eastern end, and so entered the Forum from the east. There is no evidence that the street continued all around the hill. On the south, the street had two straight stretches broken by the curve in the slope, so that the two made



133. Plan of part of colonnade, south side of Roadway. Scale, 1:40.

an angle of ca.  $153^{\circ} 30'$  with each other (see Plan 1). The western portion was  $18^{\circ} 15'$  north of west, and ran directly to the west gate, its axis being the axis of the arched entrance. The first columns showing above the modern surface were at a distance of 75 m. from the gate. In the middle of the modern roadway, somewhat nearer to the gate, were two bases. These were cleared, measured, and quickly buried again, so as not to interfere with the public road (Pl. 46 d). They formed part of the south side of the central roadway (Fig. 133).

Here the Roman roadway was 3.6 m. above the entrance in the west gate; but further east, in the Roadway Trench, the floor was 6.76 m. above, so that the



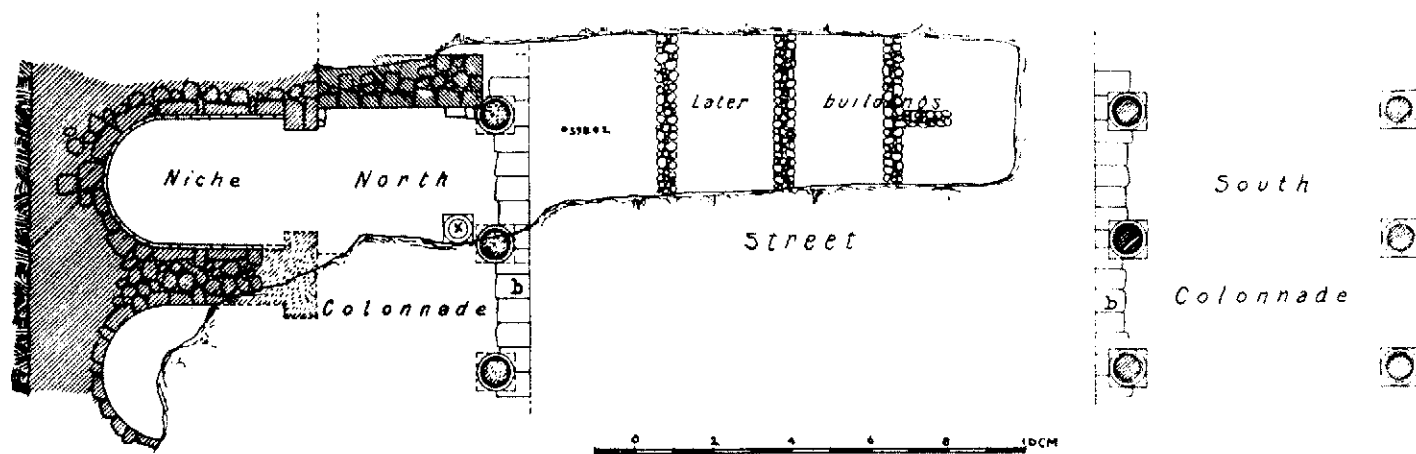
134. Section through Fig. 133.

street had a gradual rise towards the east, at least as far as the turn in the street. This small excavation near the gate supplied a quantity of data in regard to the construction. Just east of the excavation several columns of the various rows projected above the ground.

These were slightly leaning. They gave the width of the central roadway as approximately 16 m. between centres of columns, while the width of colonnade

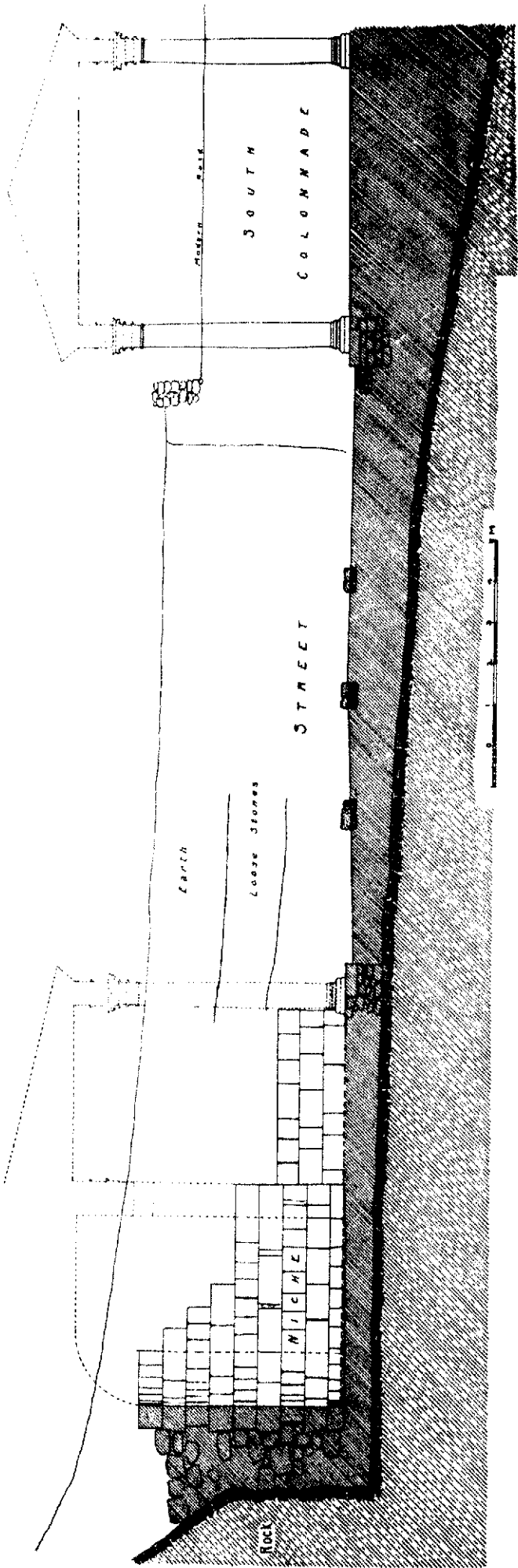
along the south side was 6.9 m. The columns were monoliths, and were placed 3.26 m. from centre to centre. They were 4.7 m. high, the lower diameter 61 cm. and the upper 56.5 cm. The bases, a (Figs. 133 and 134), were of the usual Attic type, with deeply cut molding, like those of the Herodian temple. They rested on a curbing of slabs, b, ca. 38 cm. thick, below which was a rough rubble footing, c. This curbing was ca. 95 cm. wide, and its top 14 cm. above the level of the central passage. Inside it the paving of the colonnade consisted of a layer of small rubble, d, with a surfacing of beaten earth, m. The edge of the curb was 78.5 cm. from the centre of the column, so that the width of the street between curbing was only ca. 14.5 m. The depth of the street filling was 39 cm., and consisted of a layer, 35 cm. thick, of rough stones, e, with a layer of small stones, f, 4 cm. thick, above it. On top of this was the final surfacing of beaten earth, m.

*Niches* — In the Roadway Trench, on the axis of the temple, a portion of the northern side of the street was uncovered (Pl. 46 b c). In Fig. 135 the plan of this is combined with the plan of the intercolumniation from the excavation nearer



135. Plan of Roadway Trench.

the gateway. The street was built as close to the cliff as possible, and the rock was partly scarped away (Fig. 136) to receive it (Pl. 46 b). The north side, therefore, was not open, and did not have a double row of columns, the face of the scarp being marked with masonry, in which was a series of semicircular niches. Two of these were cleared in the Roadway Trench, but the south side at this point could not be cleared, owing to an accumulation of debris over 4 m. deep below the level of the modern road. One of the niches was cleared to the floor-level. It was 3.34 m. wide and its floor 45 cm. higher than that of the colonnade. A wall, 1.52 m. thick, extended straight out from the sides of the curved portion of the niche to a distance of 4.05 m. At the outer end was an offset, which apparently formed the side of an arched entrance to the niche. The outer face of the series was 5.41 m. back from the edge of the curb, so that the colonnade on this side was somewhat narrower than that along the south. The adjoining niche could be measured only across the top, and, as the walls of both niches had been displaced by pressure, the dimensions could be only approximate. The wall between was 1.52 m. thick, and the second niche appeared to be 3.04 m. in width, but must have been originally much less. These niches



136. Section of Roadway Trench. Scale, 1:100.

were wider than the intercolumniation of the colonnade, as has been indicated on the plan (Fig. 135). The series of niches could, therefore, not have corresponded to it, unless we consider the niches to have been of two sizes, a larger and a smaller alternating. The masonry was not characteristic of the Herodian period. The niches may, therefore, have been entirely rebuilt at a later period.

The single base found here (Pl. 46 c) was not in alignment with the regular series of street columns. It was also wholly different from them in size and contour, so that it cannot be considered as belonging to this period. In Fig. 135 this base is shown at  $\times$ , with several of the regular columns restored to their proper positions. On the east side of the trench was found a later wall extending across the north colonnade from the end of the niche nearly to the edge of the curb, or to where the row of columns would have been (Pl. 46 b c). This wall was of different masonry, and contained fragments of Roman architraves and other details probably belonging to the original colonnade. To this later period also belonged the series of rubble house-walls which extended lengthwise of the street. The footings of these were sunk but a few centimetres below the hard-packed surface representing the level of the Herodian street, and clearly belonged to a period when the great street had ceased to be used as such.

## 5. THE CIVIC CENTRE

### a. THE FORUM

The site selected for the civic centre of the Herodian city was a large, fairly level, natural terrace to the east of the summit of the hill (Pl. 47 a). The actual area of the Forum corresponded very closely to that covered by the threshing-floor of the modern Arab village (see Plan 1). Its level was 26.5 m. below the court of the great temple, and 19.7 m. above the threshold of the west gate of the city. Along the north side of this area was built a heavy retaining wall, extending towards the west beyond the Basilica. This wall was traced for 161 metres. Smaller walls were built along the east and south sides. These were carried down through the earlier strata in construction trenches, the difference between the previous level and the new one being filled in with debris. The Forum was 72.5 m. wide at the eastern end and 128 m. long on the north. It was not quite rectangular. The north side was orientated  $7^{\circ} 5'$  north of east. The west end was  $8^{\circ} 55'$  west of north to agree with the axis of the Basilica, which was placed slightly askew on the platform. The other two sides of the Forum conformed to these.

It was surrounded on all sides by a colonnade ca. 6 m. wide. On the north this probably was open to the exterior, as well as towards the Forum, so as to afford a view over the city, with the Hippodrome below. On the west it was backed by the Basilica, while the south and east may have been enclosed by a solid wall, to screen it from the adjacent buildings. There were probably entrances on the east and south, the former giving access from the Street of Columns, which ran from the west gate, swept around the eastern end of the hill, and so came up to the eastern end of the Forum.

Only the western colonnade has been excavated, the rest of the Forum being buried under a thin layer of debris. At the west end this debris was 1.5 m. deep, and sloped down towards the east, so that parts of the pavement of the eastern colonnade appeared on the surface. The central open space was unpaved, that is, it had the usual beaten earth floor. The colonnades, however, were paved with slabs of limestone, which, owing to their nearness to the surface, had mostly been removed by stone thieves. To get them out, many of the pedestals had been overturned or displaced. It was only where pedestals remained *in situ* over the original pavement that details of the construction could be obtained. The west colonnade had a slight slope downwards towards the north. Originally along this short side of the Forum there were 24 columns, and seven of these have always been visible, their faces much weathered and decayed by exposure (see Pl. 47 a). Others were broken off below the modern surface, but still approximately in position with their pedestals, while the remainder were represented by pedestals and a few bases, mostly moved out of position. The spacing was 2.5 m. from centre to centre of the columns, except at the middle of the west side, where a space was left 4.38 m. wide, as an effective entrance to the Basilica, the east doorway of which was opposite this point.

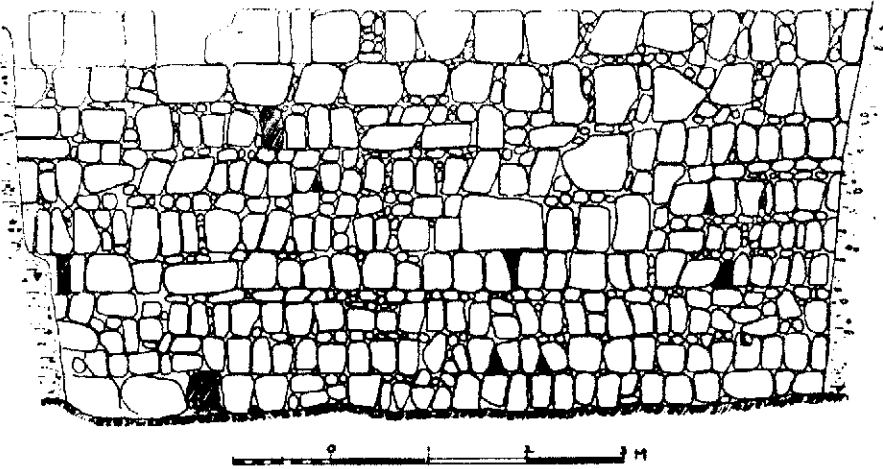
The Herodian colonnade had been carefully laid out, as was evidenced by the exact spacing of those pedestals which remained undisturbed. From the centre of the pedestal at the northwest corner of the Forum to the centre of the pedestal at the north side of the entrance space (i.e., the twelfth pedestal) the distance was 27.65 m., or an average for the eleven spaces of 2.51+ m. Pedestals 5 and 7 (counting from the corner) were respectively 10.05 m. (= four spaces) and 15.08 m. (= six spaces). The two end pedestals (8 and 11 on the plan) of the four cleared to the south of the entrance space were exactly 7.5 m. on centres.

The pedestals which were found along this side were of two distinct types. Those of one series, representing the original Herodian work, were very well modeled and cut (Fig. 140 c on p. 215), and varied little in height. The others were of various heights, and had different contours, some even with simple plinths and bevels, and some unfinished. These belonged to the later restoration under Severus, and indicate a hurried and cheap restoration of the building, quite in accord with the evidence found at the summit temple. The Herodian pedestals averaged ca. 73 cm. in height, and were ca. 81 cm. square. The base was composed of a plinth with a torus and cyma recta between fillets, and the surbase of the same, inverted, without the torus. The bases of the columns were of the common Attic type, but the cavetti were more nearly semicircular than those of the summit temple and the street. The upper member consisted of but one simple torus and fillet, not double, as on the summit. The columns were 5 m. high, and monolithic.

To avoid excessive filling-in, the level of the Forum was kept as low as possible, and the southern end of the west colonnade was sunk in a shallow trench in the rock, so that the rock-level in the open, unpaved, central space was even with the top of the curbing under the colonnade. Whether this unevenness in



the surface remained exposed in the Forum, or whether the filling was brought up all over to the level of this rock surface, could not be determined. Farther towards the north, where the rock began to slope more and more rapidly, the row of columns was carried on a rubble wall, not so well built as the foundations of the temple (Pl. 49 b, c). On the outer face of the great terrace wall along the north the rock was 4.77 m. below the colonnade floor, and this outer wall was very well and solidly built (Fig. 137). It was 1.85 m. thick at the top, and built in courses from 1.1 m. to 1.5 m. deep, each set back slightly from the one below



137. Masonry in outer face of north terrace wall. Scale, 1:80.

it. As in the temple foundation, headers on edge were used, but the masonry was not so uniform in this respect, small stones being also extensively employed. This outer retaining wall was carried up nearly to the level of the floor, and on it the flat slabs were laid. The occurrence of these pavement slabs *in situ* upon the various foundation walls was of assistance in tracing the Herodian structure, as they belonged exclusively to that period.

During some later period low walls of small rubble were built between many of the pedestals along the west side and on the excavated portion of the north side. These were covered with plaster, and contained doors with rabbeted jambs (Pl. 49 a, b 11).

#### b. THE BASILICA

As noted already, the north terrace wall continued unbroken to the west beyond the end of the Basilica. The inner foundation wall of the Basilica also continued through in line, and on it, just north of the small apse, the coping slabs were *in situ* (Pl. 48 b). Thus it appears that the colonnade along the north side of the Forum continued to the west, linking together the various buildings on the terrace. The original Basilica, therefore, extended only as far as this inner wall. It was a rectangular building, 32.6 m. wide and 68 m. long over its foundations (Plan 12). The entire east wall had been removed down to rock by stone thieves, but its position was determined by the shallow trench cut in the rock for the footings, and by a portion of the flight of steps leading from the level of the colonnade to the Basilica floor 1 m. above (Pl. 49 c).

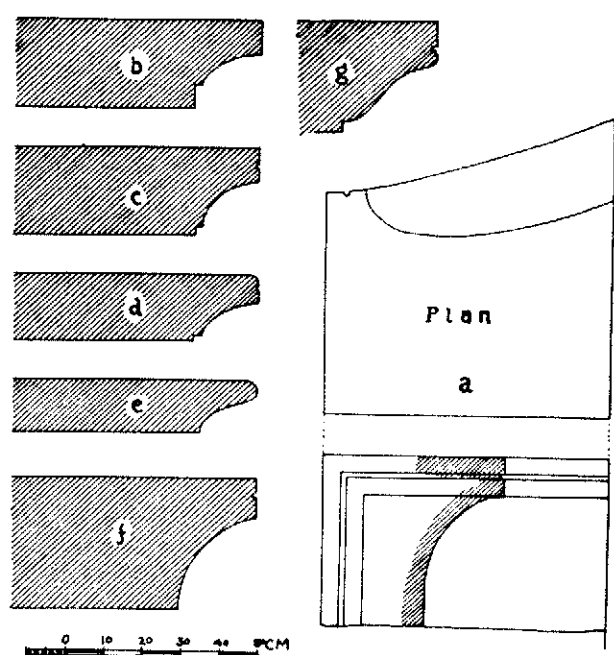
The southern part of the building, excepting a portion of what must have been the south wall, was not excavated. The single column (Plan 12, B 7) of the interior south aisle showing above ground was cleared to its foundation in 1908, as was also the corner of the inner series of foundations at the southwest. The west wall, which had been destroyed, was rebuilt farther in during the later restoration.

The interior of the building consisted of a large central hall, 14.92 m. wide, and ca. 44 m. long, with open colonnades or aisles on three sides. Of these, one complete column remained on the south, and six along the west, where there had originally been twelve. In the portion excavated, the pedestals of the other columns, extending to the beginning of the apse, were still *in situ* (Pls. 47 b; 51 b).

The central hall had been paved with stone, while the side aisles were paved with plain white mosaic, with a narrow border of black near the edges (Pl. 50 a). This mosaic was almost perfect along the west side and on the east as far as the north end of the hall. Opposite the door leading to the tribunal had been a small ornamental centre-piece in color, but this was badly damaged. Its shape was a cinquefoil outlined with red and black tesserae.

The single column *in situ* at the north end belonged to the original building, but had been re-erected on a plain pedestal. The foundation wall below it, which extended the width of the central hall, seemed from its poorer construction to be also of the later period, but a row of columns must have existed here or farther north in the original building.

*Tribunal* — At the northern end was a semicircular tribunal, 4.4 m. in diameter (Pls. 47 b; 50 b). It had four concentric seats with molded edges (Fig. 138).



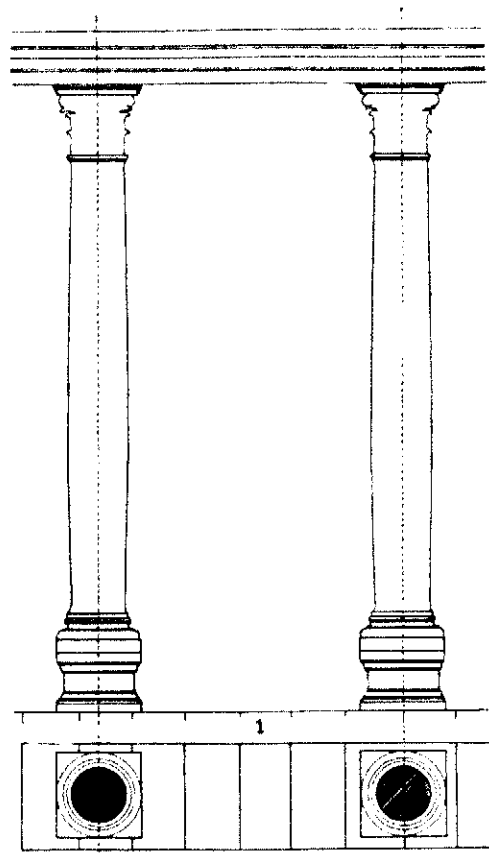
138. Moldings from tribunal and from debris near it. Scale, 1 : 20.

The lowest seat was 32 cm. high and 33.5 cm. wide, including the molding. The second was 100 cm. high. Above this the series appeared to have been rebuilt, as the masonry is less well fitted. The old moldings, however, were retained. The moldings of the inner ends of the steps and nearly all those of the upper steps had been displaced, but in the neighboring debris were a number of fragments of contours and radii similar to those of the moldings which were *in situ*. Among the fragments was a large block, a (Fig. 138), which had formed the inner end of one of the steps, the molding returning down the

outer edge. The facings of the steps were of fitted stones, and the space between them and the main walls was filled in with small rubble. The seats were built upon a pavement which was 1.48 m. below the aisles, and at the east and west were flights of steps leading to that level. The steps on the west led from a door on to the long west aisle, which extended the full length of the building. The east aisle was similar, but all traces of any door and wall had been swept away. The steps belonged to a restoration, but occupied the position of the original steps, as the doorway apparently belonged to the first period. Across the south side was the finely molded base of a wall which must have served as a sort of balustrade, dividing the lower room from the main building, if the latter opened directly on to the tribunal. The floor was paved with large slabs, those inside

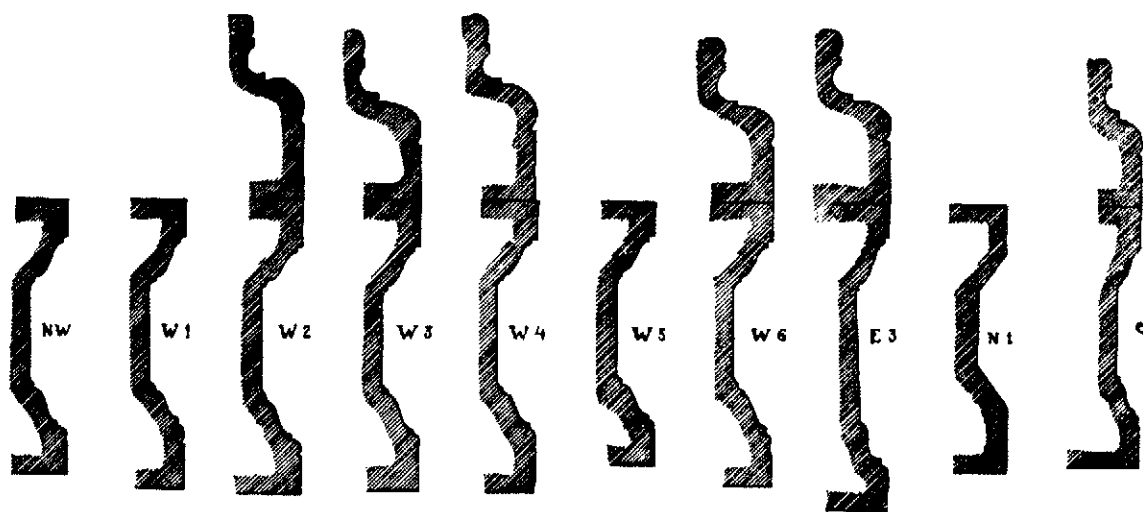
the round portion being cut to radius, with a large semicircular slab in the centre. The exact centre was marked by the remains of an iron staple, to which had been attached a ring.

*Columns* — The pedestals of the Basilica rested, as in the Forum colonnades, on a curbing of well-dressed and fitted blocks, 1.35 m. long and averaging ca. 70 cm. wide. The columns were ca. 3.88 m. on centres (Fig. 139). The pedestals were 108 cm. square and 76 cm. high, although these dimensions varied slightly. In Fig. 140 are given the contours of the pedestals along the west side (NW corner and W 1 to W 6) and those of the pedestal belonging to the east row (E 3), with one from the Forum colonnade (C). It will be seen that the moldings, where finished, are uniform in contour, varying only in height. The pedestal N 1 was lower, and finished with plain bevels only, in place of moldings. It belonged to the restoration period, when apparently the plan of the northern end of the building was changed. The best preserved pedestal and column base was W 1, and sections of the moldings are given in Fig. 141, e being the base of the column, f the base of pedestal, and g the surbase.



139. One intercolumniation of west aisle. Scale, 1:100.

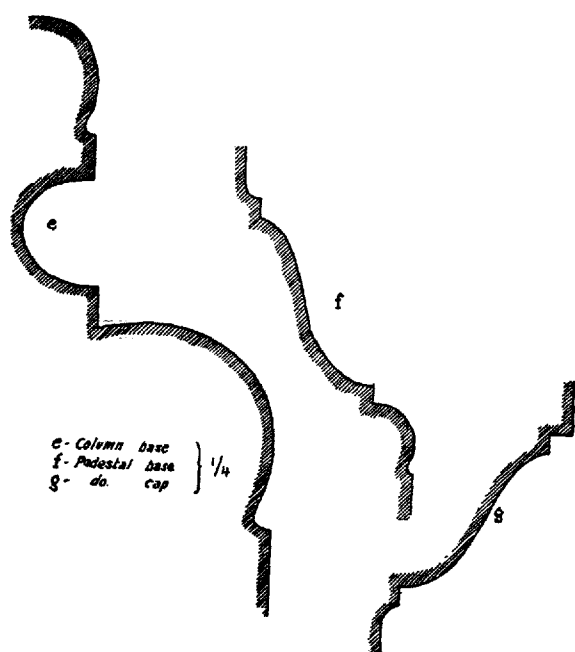
The complete order of the interior is given in Fig. 142. The pedestals were in one block, and the bases in another. The latter were of Attic type, 44 cm. to



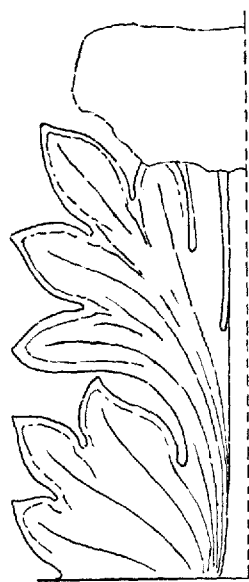
140. Contours of pedestals and bases, showing variations. Scale, 1:20.

47 cm. high, the lower plinth being of width equal to that of the pedestals. The columns varied from 5.93 m. to 6.03 m. in height. These differences, with those of the pedestals, make the tops somewhat uneven, but not seriously so, and the inequality was probably adjusted by the capitals. The lower diameter of the columns was 73.5 cm., and the upper 66.5 cm. The columns have all a slight swell-

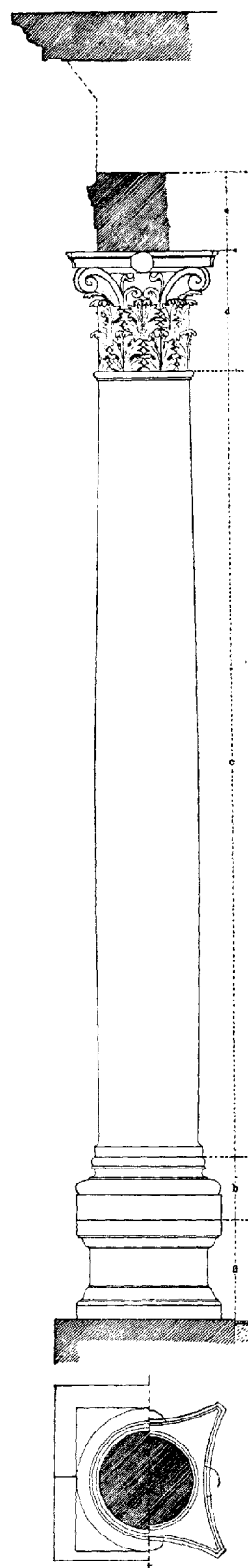
ing one-third of the distance from the base, at which point the diameter was 77.9 cm. (Pl. 51 a). They were monolithic, and had a wide fillet cut on the bottom,



141. Contours of moldings of pedestal W 1 (f, g) and base of column (e). Scale, 1:4.



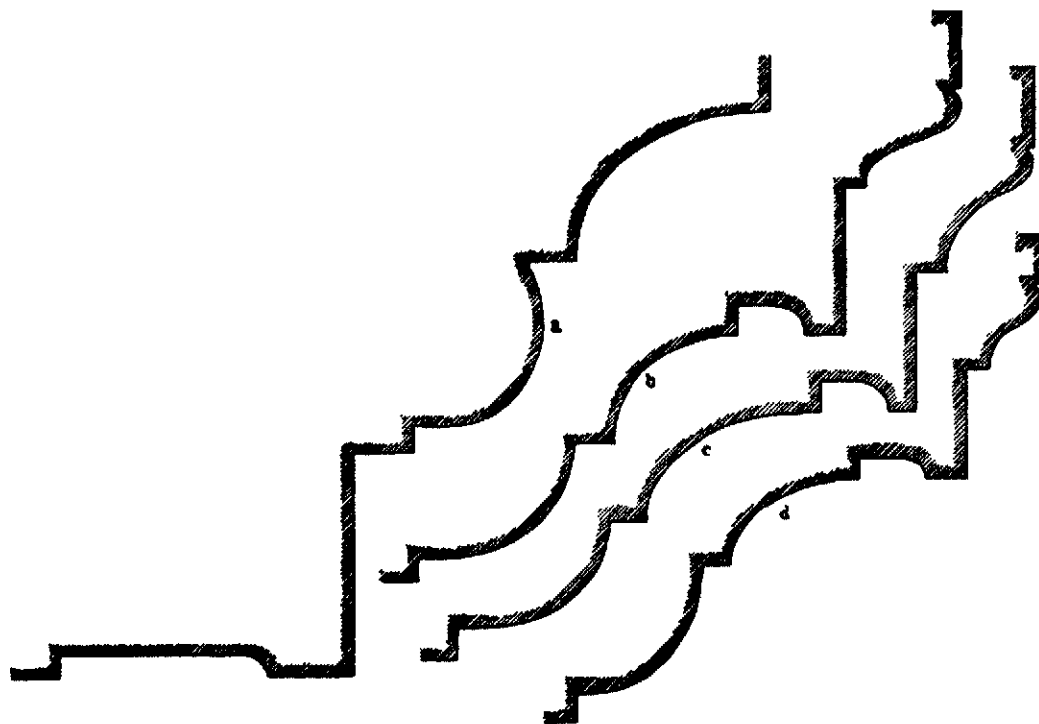
143. Detail of capital.  
Scale, 1:4.



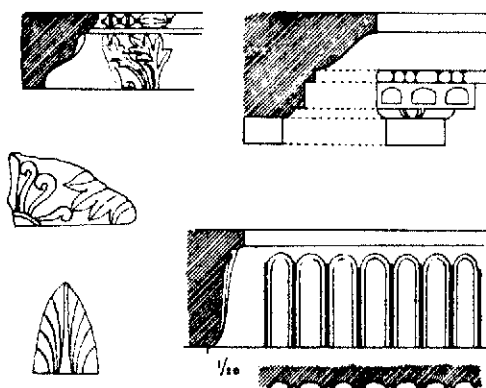
142. The order of the Basilica. Scale, 1:40.

and an astragal and fillet on the top. The capitals were Corinthian. Two almost perfect specimens were found in the debris (Pl. 50 a). The leaves were well mod-

eled and cut (Figs. 142 and 143). The height of the best specimen, found in the eastern aisle, was 90 cm., and the spread of the abacus 1.15 m. In the debris of the west aisle was a fine capital 57 cm. high, fitting a pilaster whose top diameter was 59 cm. There were two rows of acanthus leaves, the lower row 31 cm. high, the second 23 cm.

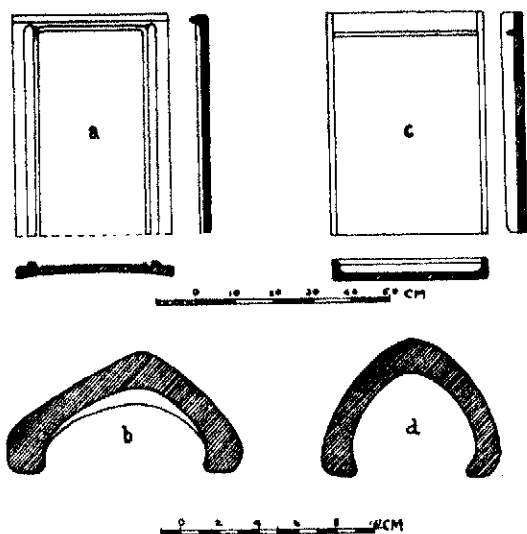


144. Contours of cornices. Scale, 1 : 4.



145. Miscellaneous fragments from debris.  
Scale, 1 : 20.

*Cornices*—Several blocks were found in the debris. The contours of those best preserved are given in Fig. 144 a-d. These blocks were unornamented. With them were found various broken fragments of other details (Fig. 145), each one a unique specimen. No duplicates of them were found, since the building had served as a quarry from the later Byzantine period to modern times.



146. Roofing tiles. a-b. Herodian period.  
c-d. Later Roman period. Scale, 1:20.  
Scale of ridge tiles, 1:4.

*Roofing* — The central hall probably had a clerestory, and was roofed with wooden trusses covered with tiles, and the side aisles with single pitch roofs. In the debris were a number of fragments of terra-cotta roofing tiles. Those belonging to the first period, found in the lowest stratum above the floor, had the shape a (Fig. 146). They were of hard red ware, 40 cm. wide and ca. 55 cm. long, slightly concave on the under side, and with the side ridges as shown. With these were found the ridge tiles, b, many still containing the lime mortar with which they had been cemented in place. They were ca. 12 cm.

wide at one end, and tapered, being ca. 30 cm. in length. The tiles c of the second period, found in the upper debris, were of a yellower ware, more brittle and much simpler in pattern, the edges consisting merely of vertical flanges. They were ca. 40 cm. by 57 cm., like the earlier variety. The ridge tiles belonging to them were ca. 35 cm. long. They were narrower and higher, and were of horseshoe shape in section, d.

*Restoration* — During the Severan period the Basilica and the Forum were entirely reconstructed. The building, like those on the summit, had apparently been in ruins. Many of the columns had been overthrown, and the pedestals carried away. In the reconstruction new bases were made, some in a crude imitation of the Herodian bases, but the majority were unfinished, or provided with simpler moldings. The variations in height and width were much greater than those of the earlier period, and in some cases in the colonnade the bases were so small that they were raised on a layer of debris and small stones above the original pavement. The interior plan of the Basilica remained much the same. The west wall was moved ca. 1 m. inside its former position, and now consisted of a series of wide openings, probably arched, separated by massive piers. The northern end of the building was carried to the outer terrace wall, and a much larger tribunal constructed, probably still retaining the small one as a centre. To the new rows of seats belong the cruder moldings b and e (Fig. 138, on p. 214). Only one side of this later structure remained. It rested on shallow footings of small rubble running over the Herodian walls. The steps leading to the lower tribunal level were rebuilt, and the floor of the latter repaired.

At a still later period the space west of the axis of the building between the end of the central hall and the tribunal was filled with small rooms, built against the earlier walls. The two spaces of the west aisle were filled with masonry, and against this wall, i.e., along the east side of the aisle, a narrow flight of steps was built. This had a molded balustrade. The large tribunal of the Severan period continued to be used, as several repairs of small squared stones show, but just what use the building had in this period could not be determined. Possibly it

continued to be used as the administrative centre of the town. During the Byzantine period a large apsidal church (now the mosque) was built farther east.

## 6. MISCELLANEOUS BUILDINGS

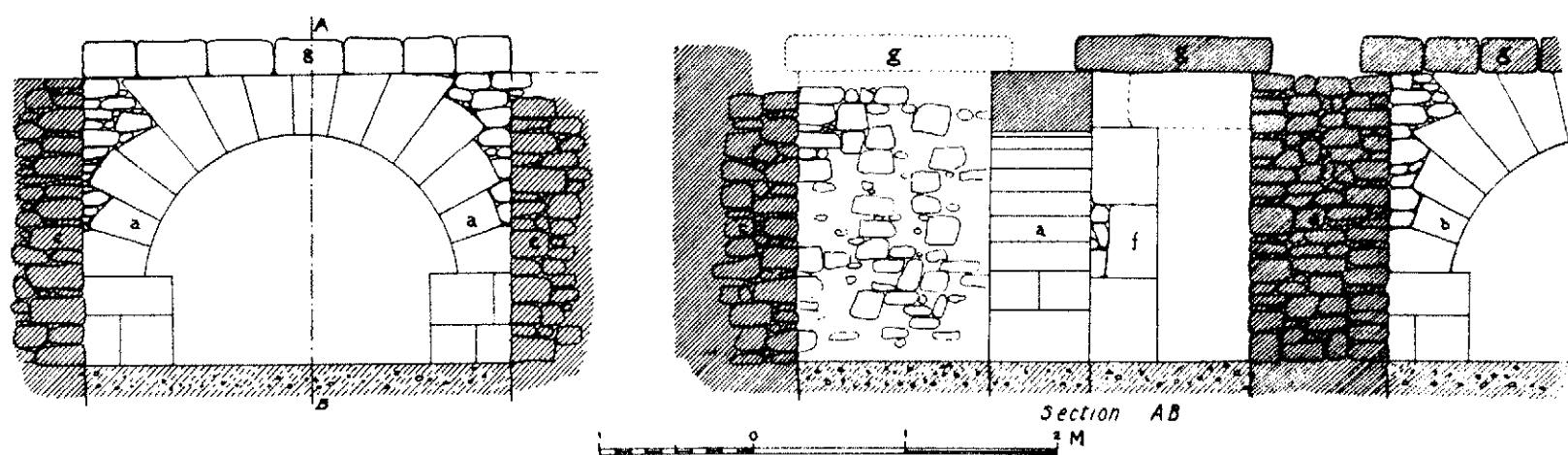
### a. HIPPODROME

No excavation has so far been undertaken on the site of the building lying east of north of the Forum and ca. 74 m. below it, which is marked by a number of columns still showing above the surface (Plan 1). The building occupies a long narrow depression in the side of the hill. The steep, sloping sides and end of this depression were utilized for the seats. The area enclosed by the rows of columns was 55 m. wide and 225 m. long. The south end, to judge from the contour of the present debris and hill, was semicircular, while the north end was square and open, being near and parallel to the probable line of the city wall. The columns were monoliths, and of the same shape as those of the roadway and in the other buildings.

Farther towards the west, on a similar level, north of the temple, the side of the hill has a large, semicircular indentation, ca. 75 m. across. This likewise was open towards the north, and in the slope of the hill behind it was an outcrop of well-dressed masonry. This spot seems the most likely location for the Theatre, which must have formed one of the features of the Roman city.

### b. MINOR EXCAVATIONS

South of the modern village, on the southern side of the hill, adjoining the east end of the Street of Columns, an area 20 m. by 22 m. was excavated (Samarra's Land<sup>1</sup>). The buildings here all proved to be of late date. There were



147. Sections showing arches and roofing of cellars. Scale, 1:100.

two superimposed layers of construction. The lower, apparently of the Severan period, consisted of rubble foundations belonging to a large building. This building contained a series of rooms arranged in rows, fifteen of which we excavated (Pl.

<sup>1</sup>Samarra and Kaïd are the names of the owners of the two small areas excavated.

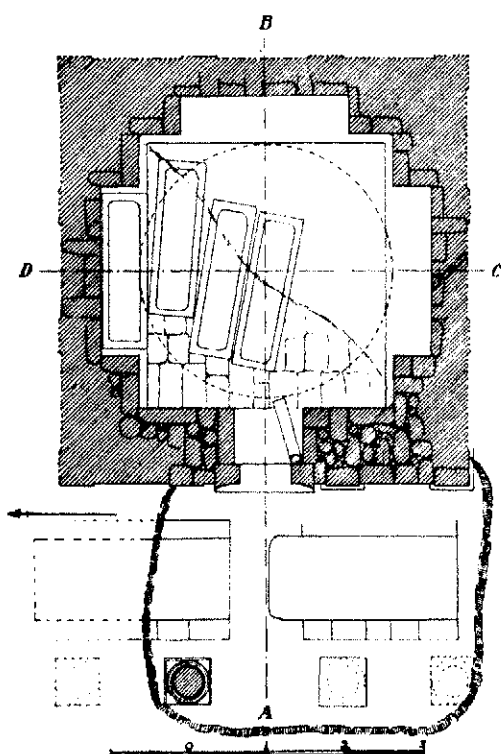
52 c). One of them, which had been used as a cistern, had a low, semicircular niche on the east side. This cistern did not extend into the rock, but consisted merely of rubble walls plastered over.

The upper layer contained buildings of the Byzantine period. Along the north side, adjoining the modern road, was a row of rooms, each ca. 3.5 m. square. The walls were built of larger stones, well fitted, but not squared. The southern face of the series was finished with dressed masonry, laid in courses of alternate headers and stretchers, resting on a rough rubble foundation. A space 7 m. wide separated this building from another to the south. This consisted of several rooms, whose dimensions, owing to the destruction of walls, could not be ascertained. The cistern of the lower series had been used in this period, and one of the new walls was carried across it on an arch.

North of the village, between the Roman Forum and the mosque, a small area was cleared (Kaid's Land), disclosing the cellars of a house (Pl. 52 b). These were covered with slabs, supported by finely built arches which separated the rooms from one another (Fig. 147). The masonry was like that of the upper series of rooms just described, the arches, e.g., being like that over the cistern. The main walls, c d, were built of rubble, while the arches, a a, were of dressed masonry cut as voussoirs. The arch began two courses above the floor, and these two projected as a ledge the thickness of the arch. The roofing consisted of two rows of slabs (g) over each room, the ends resting on the side walls and the arch. The door-jambs were finished with dressed masonry (f), but were not rabbeted.

#### c. MAUSOLEUM UNDER SAMARRA'S HOUSE

Near the southeast corner of the village, at the point marked Maus. on Plan 1, a small but well-preserved tomb was excavated. Its floor-level was 7.15 m.



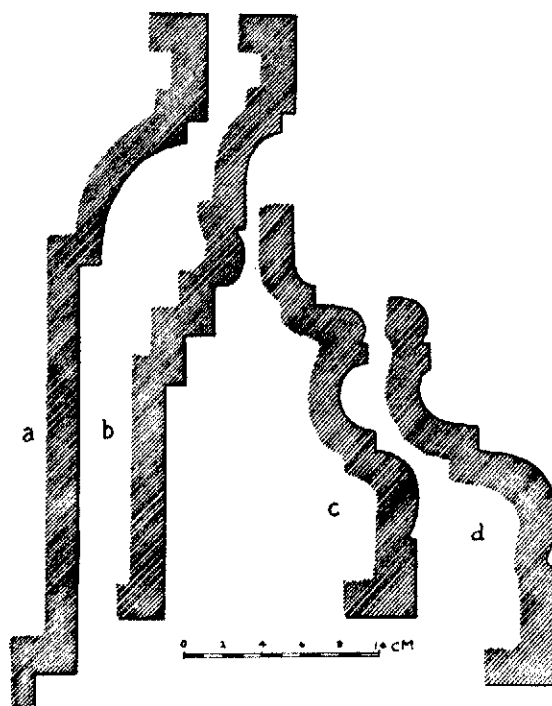
148. Plan of Mausoleum. Scale, 1:100.

below the floor of the village house which had been built over it. Owing to the existence of this house, the whole of the exterior of the tomb could not be cleared, but a pit sunk down from the courtyard of the house disclosed more than half of the west front, with the entrance through which access to the interior was obtained.

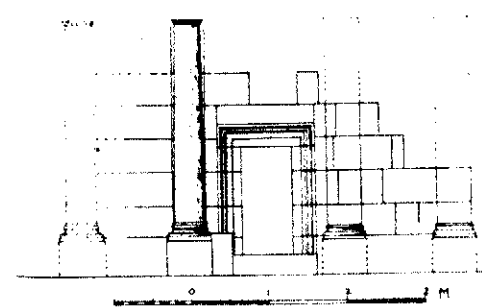
The tomb was a square chamber, with a portico extending the full width of the façade (Fig. 148). The walls were of rough rubble, faced outside and inside with dressed limestone ashlar. The front was decorated with four pilasters, 43 cm. wide, and projecting 2.5 cm. These had bases 17 cm. high, with the contour shown in Fig. 149 d. The courses of ashlar still *in situ* were 42, 44, 42, and 42 cm. respectively, counting from the bot-



tom up, and these were carried along the face including the pilasters, the latter being bonded in the wall with specially cut stones. The columns of the portico were placed opposite the pilasters, with their centres 2.5 m. from the latter (Fig. 150). The pavement of the portico was of finely dressed slabs, 26 cm. below the entrance sill. The bottoms of the bases of pilasters and columns were 45 cm. above the pavement, and under the columns were plain cubical blocks of this height. Plinths of similar height must have been below the pilasters, but these, so far as the face was cleared, were missing. The bases of the columns were similar to those of the pilasters, but of greater projection (Fig. 149 c). Only one column was *in situ* in the area excavated. The base was cut from one piece, and the shaft was monolithic. Its height was 2.64 m., the lower diameter 38 cm., and the upper ca. 32 cm. The surface was finished smooth, but originally it had been the intention to cover it with relief decoration. A number of intersecting circles had been inscribed regularly over it as the basis for the design, but no cutting had been done. On either side of the portico and separated from each other by a space 94 cm. wide in line with the entrance were two platforms, 51 cm. and 54 cm. high. These were of dressed stone. They did not extend to the wall or to the plinths of the columns, and were erected as bases for the two huge sarcophagi which still rested upon them.



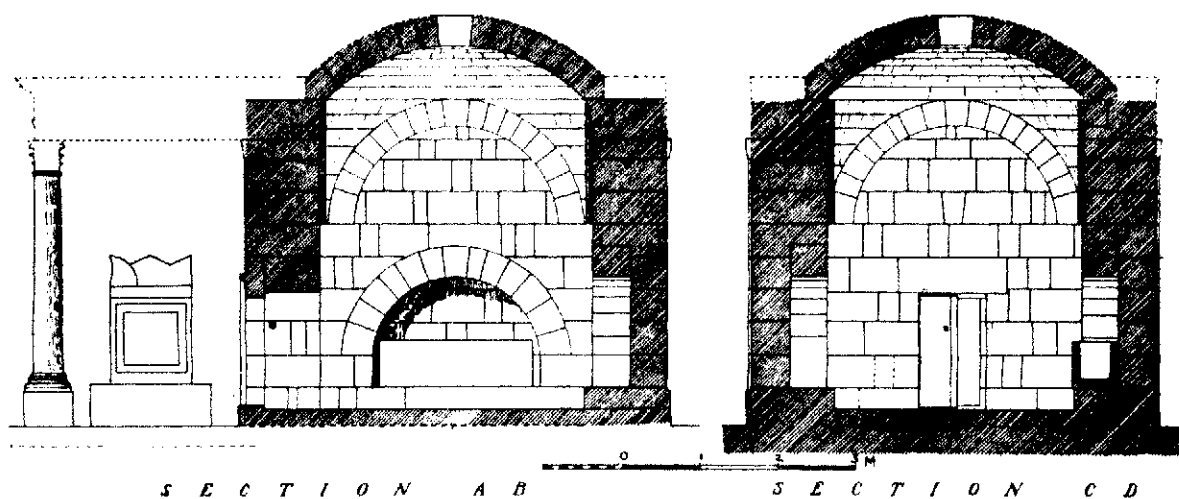
149. Contours of moldings: a, interior arches; b, architrave of door; c, base of pilaster; d, base of column. Scale, 1:4.



150. Front (west) elevation. Scale, 1:100.

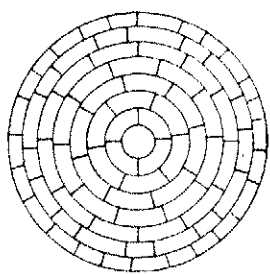
The entrance was 67 cm. wide, and had an architrave, of the pattern shown in Fig. 149 b, across the top and down the sides, ending against the flat sill, which projected 10 cm. beyond the deepest molding. On the inside the door had rabbeted jambs. The jamb on the north side was 23 cm. wide and 7.5 cm. deep. That on the south was made 7 cm. deeper in order to receive the door when open. The door was still *in situ* and in perfect working condition. It was a single slab of stone, 84 cm. wide, 1.43 m. high, and 15 cm. thick. At its upper and lower inner ends there were circular pins which turned in sockets cut in the sill and lintel. At a distance of 52 cm. from the top, and 10 cm. in from the outer edge, was a hole ca. 7 cm. in diameter, which did not extend through the stone, but was cut on the outer face only. In this was the end of the iron handle of the door, firmly fastened in with lead. Above this was a hole 7 by 9 cm., cut through the stone. This was slightly below a deep hole cut in the north jamb, and was the socket for the bolt, all the metal of which had disappeared.

The interior of the tomb was not quite square, the north side being 3.47 m. long, the south 3.5 m., while the east and west sides were only 3.27 m. The interior was complete. In the middle of the north, east, and south sides were niches, 2.13 m. wide and 48 cm. deep. These were raised above the floor 28 cm., the height of the lowest course of masonry, which apparently ran around all four sides of the room uniformly, and projected as a ledge or surbase 10 cm. beyond the face of the wall. Each niche was crowned with a semicircular arch of well-fitted voussoirs, 15 or 16 in number. These were 38 cm. high, and their outer edges were concentric with the inner edge of the arch, and were flush with the face of the wall (Fig. 151). The courses inside the niches were continuous with



151. Longitudinal section (A-B) and transverse section (C-D). Scale, 1:100.

those on the rest of the wall. At a height of 2.25 m. above the floor began another semicircular arch on each of the four sides of the chamber. The voussoirs, 17 in number, were cut with the molding shown in Fig. 149 a, and the lowest one in each case was specially cut to bond in with the regular horizontal course of the wall. The voussoirs were 33 cm. high, and, like the lower arches, had both edges concentric. Inside the arches the walls were carried up with the regular coursing, and the inner member of the molding was flush with them. Upon the tops of these arches rested a flat dome, 3.27 m. in diameter, and from spring to top 71 cm. high. In the four corners were pendentives of smooth stones more carelessly built up than any other part of the interior. In two corners these



152. Diagram of dome.  
Scale, 1:100.

had been cracked and forced out of position by pressure. As the diameter of the dome was equal to the short side of the chamber, its lower edge was flush with them, while on the other two sides, the east and west, it was practically on a line with the outer member of the moldings. There were seven rings of masonry in the dome and a hole ca. 40 cm. in diameter at its top. In the top ring nearest the opening there were four stones; in the second, six stones; in the third, eight; in the fourth, ten; in the fifth, twelve; while the sixth and seventh had an irregular number of short and long stones arranged to break joints with the

other rows (Fig. 152). The stones in the upper rows were of nearly uniform length, and the breaking of joints was very cleverly planned.

The floor was paved with slabs of stone. The niche on the north side only was completely cleared. In it rested a plain rectangular sarcophagus, 56.5 cm. wide, 198 cm. long, and 61 cm. high. The sides were 6.5 cm. thick. The lid was missing, and the sarcophagus was empty. On the floor three others were visible, all of the same size as the one in the niche, and all had been rifled and cleaned out. There may have been still others in the debris on the opposite side of the room. Apparently, the chief members of the family of the two persons buried in the portico had been placed in the niches, and, when these places had been filled, the later sarcophagi had been simply placed on the floor of the vault. The owner, and perhaps his wife, were placed outside in two much more elaborate sarcophagi, resting on the raised bases on either side of the entrance. The sarcophagus on the north was simpler in design, but of better finish. It was 2.5 m. long, 1.04 m. wide, and 1.11 m. high, exclusive of the lid. The long face was divided into two wide panels by short fluted pilasters with Corinthian capitals. These were in high relief and not connected with the base or the top moldings of the front. From the tops of these pilasters were suspended heavy garlands of laurel leaves with a bunch of fruit (?) hanging from them. In the centre of the spaces were Medusa heads, with a double knot below each. The front was enclosed by a wide flat fascia, 16 cm. in width, with a deeply cut cyma reversa molding 10 cm. wide inside it. The lid was in the form of a pediment with moldings similar to those around the lower face. In the centre was a circular medallion portrait of the occupant (?). At the outer corners were two large acroteria. The ends of both body and lid were finished perfectly plain. The end nearest the door had been broken through by thieves. (See Pl. 79 b.)

The sarcophagus on the south was more ambitious in design, but of wretched workmanship. It was 2.44 m. long and 1.05 m. wide. Along the bottom ran a wide band of interlaced laurel leaves, while the ends and top were decorated with a molding similar to that on the other sarcophagus. Within this, cut in very high relief, was a row of nude soldiers, each with the end of a cloak across the breast, fastened with a huge circular clasp on the right shoulder. In the left hand they carried short spears. The bodies were crude attempts at delineating human beings, the heads and limbs not being in proportion to the bodies, and roughly cut, without any attempt at modeling. The end towards the entrance was broken away by thieves. On the other end was a group of two men carrying bunches of fruit. The lid represented a simple pitch roof running lengthwise of the sarcophagus. It was cut to represent eight rows of round end tiles. Near the edge of the roof were heavy festoons of leaves, supported over the shoulders of three cupids. At the corners were large squatting lions, with their tails curled up over their haunches. The workmanship of the cupids and lions, while poor, was superior to the row of figures below, but no part of the detail was equal to that on the north sarcophagus. (See Pl. 79 a, c.)

PART IV

ARCHAEOLOGICAL MATERIAL

BY

GEORGE ANDREW REISNER

## CHAPTER I—INSCRIPTIONS

### A. ISRAELITE INSCRIPTIONS<sup>1</sup>

#### I. GENERAL ACCOUNT OF OSTRACA

##### a. DATE AND FORMS

In the eastern part of the courtyard in rooms 401, 416, 417, 419, 470–474, in the *lowest part of the debris of occupation*, we found a number of potsherds bearing Israelite inscriptions written with the ordinary carbon ink used in a similar way in ancient Egypt. The forms of the letters used in the script of these ostraca are like those of the oldest known inscriptions, if one allows for the difference between pen writing and chiseling in stone; and if no other information were available, they would be assigned on epigraphical grounds to the 8th or 9th century B.C. These ostraca, being merely temporary notes, were dated with the year of the reign, but without the name of the king.

The identification of the second portion of the Israelite palace as the palace of Ahab was made in 1909 solely from the fact that it was a considerable structure second in point of time on the site. This fact fulfilled the conditions laid down by the Hebrew narrative in the Book of Kings. To this may be added that the character of the masonry was that of an Israelite building found at Tell el-Mutesellim.<sup>2</sup> In 1910, on the living floor of the courtyard of this palace were found a dated Egyptian jar of the reign of Osorkon II

contemporary with Ahab, Egyptian objects, and Israelite ostraca of the same general period. Whatever the exact date of the ostraca may be, all these objects are exactly such as might be looked for on the floor of the Ahab palace occupied about 865 to 722 B.C.

The potsherds used for the ostraca are from five different kinds of vessels: (1) Large two-handled (?) jars of thick dark ware with a gray or drab surface; (2) large two-handled jars of thin gray ware with a fine smooth gray or drab surface; (3) jugs of soft brown ware with a red hæmatite slip (sometimes faded yellow); (4) pans of fine brown ware with a burnished red hæmatite slip; (5) bowls of coarse yellow, brown or red ware with a red or yellow slip.

In three cases, two different ostraca fit together, — that is, the texts were written on adjoining fragments of the same bowl, see Nos. 43–44, 45–46, 48–49. Nos. 45 and 46 appear to be duplicates in the first two lines. The other two pairs are not sufficiently preserved to permit a conclusion. Other ostraca are from jars of identical materials, and may be from the same vessels; but a careful trial did not show any other adjoining pairs.

These inscribed potsherds are true ostraca in all but two or three cases, and not jar labels. (1) The known labels, or inscriptions, on wine jars and similar vessels in antiquity are, I believe, without exception written *horizontally* on the shoulder or upper part of the jar.<sup>3</sup> A number of inscriptions on our ostraca are written across the turning marks at different angles, i.e., not horizontally; for example, Nos. 16, 18, and 53. (2) Some of the ostraca are broken to a suitable shape with a certain amount of practised skill. See Nos. 2, 17, 18, 23, 53, 54, 55. (3) The texts were written to fit the potsherd (see Nos. 18, 22, and 53), sometimes forcing the scribe to split a word at the end of a line (see Nos. 4, 16, 21, 54, etc.). (4) Two real jar labels, such as occur in

<sup>1</sup> (a) The transliteration of all proper names which appear in the ostraca, whether they have Biblical equivalents or not, follows the method set forth in the Jewish Encyclopedia, vol. i, p. xxv; except that  $\aleph$  is represented by  $\$$ . Biblical proper names with no equivalents in the ostraca are given in the familiar English forms. (b) In the transcription of the ostraca into the so-called square characters smaller type indicates letters lost in the original by break or abrasion; a dot above a letter signifies that the character is partly lost or scarcely visible on the ostrakon; broken lines denote lost letters without indicating the precise number of such letters; and a dot above a dash means that one letter is wanting, no probable inference as to its character being possible from comparison or otherwise.

<sup>2</sup> G. Schumacher, Tell el-Mutesellim, I, p. 91.

<sup>3</sup> In Greek times, the jars were stamped on the handles. But in Egypt, the stamp, as well as the inscription, was on the shoulder.

Egypt and Palestine, are preserved in Nos. 62 and 63, and differ radically in appearance from the other ostraca.

The texts of the ostraca all begin with a date, such as "in the ninth year." The body of the texts after the date shows the following variations:

- (a) "In the 10th year. Wine of Kerm ha-Tell for a jar of fine oil."  
Nos. 53, 54, and probably 55.
- (b) "In the - - - th year. To *n. pr. p.* from *n. pr. l.*," or "from *n. pr. l.* to *n. pr. p.*," — both of which I take to be equivalent in meaning.
- (1) "A jar of old wine."  
Nos. 4-10, 12, 14, 15, all of year 9.
- (2) "A jar of old wine. For (or belonging to) *n. pr. p.*"  
Nos. 3, 11, 13, all of year 10.
- (3) "A jar of fine oil."  
Nos. 16-19, all of year 10.
- (c) "In the - - - th year. To *n. pr. p.* from *n. pr. l.*," or "from *n. pr. l.* to *n. pr. p.*"
- (1) "*n. pr. p.*"  
Nos. 22-33, 36-39, 42, 44-50, 56, all of year 15.
- (2) "A jar of old wine. For (or belonging to) *n. pr. p.*"  
Nos. 3, 11, 13, all of year 10, — see b(2), above.
- (d) List form:  
Ostrakon No. 1:  
"In the 10th year. To Shemaryau. From Be'er-yam.  
Jar[s ?] of old [wine].  
Rage' son of Elisha' ..... 2  
'Uzza son of - - - - - ..... 1  
Eliba son of - - - - - ..... 1  
Ba'ala son of Elisha' ..... [1]  
Yeda'yau son of - - - - - ..... [1]."
- Ostrakon No. 2:  
"In the 10th year. To Gaddiyau. From Azah.  
Abiba'al ..... 2  
Aḥaz ..... 2  
Sheba' ..... 1  
Meriba'al ..... 1."

#### b. PLACE NAMES

Before proceeding further, it is necessary to examine the proper names which I have indicated as *n. pr. l.*, because they follow the preposition "from." They are 17 in number, as shown by the table on page 229, which also gives the relations of the names to the other facts contained in the ostraca.

Of these names, Shekem is the only one which might be identified with a place name mentioned in the Old Testament. But ha-Tell is certainly the name of a place, perhaps the present Et-Tell in the valley west of Samaria, and Kerm ha-Tell would be the name of a garden or estate at that place. Kerm Yehu'ali, which occurs in No. 55 parallel to Kerm ha-Tell in Nos. 53 and 54, and further in No. 60, would be of course the name of another garden or estate. Curiously enough six of the names, Abi'ezer, Helek, Shekem, Shemida', No'ah, and Hoglah, occur in Joshua 17, 2 ff., and in Numbers 26, 28 ff. as tribal subdivisions of Manasseh. In those texts Manasseh [Machir-Gilead] is divided into Abi'ezer, Helek, Asriel, Shekem, Shemida', and Hephher, while Hephher is subdivided into Mahlah, No'ah, Hoglah, Milkah, and Tirzah. It can hardly be doubted that Abi'ezer, Shemida', Helek, Hoglah, and No'ah are either place names like Shekem or names of tribal units equivalent to tribal districts. As the remaining names are clearly not names of persons, I reach the conclusion that they also are the names of either places or tribal units. Etymologically, Shiftan, Azat Par'an (or Obot Par'an), Be'er-yam (?), and Hašerot appear to be place names. Hašerot also appears appended to a *n. pr. p.* as follows:

- Nos. 22, 23, Heleš of Hašerot.  
No. 24, Rafa 'Animes of Hašerot.  
No. 25, Aḥzai of Hašerot.

Two other of the seventeen names in the following list are used in the same construction:

- Nos. 45, 47, Marnayau Natan of Yašot.  
No. 29, [K]edar of Sak.

Three more names, which occur in this construction, may be added to the list of seventeen place names, and bring the total, including Kerm Yehu'ali, to twenty-one:

- No. 48, Ye'ush of Yasheb (?)

TABLE OF ESTATES, PLACES, OR TRIBAL UNITS (COLUMN I) MENTIONED IN THE OSTRACA<sup>1</sup>

From	To	Year	Nos. of Ostraca	
1. Shiftan	Ba'alzamar	9	12	wine
2. Gib ---	Ahino'am	9	8	wine
3. Yašot	Ahino'am	9	9, 10	wine
		10	19	oil
4. Azat Par'an (?) or Obot Par'an (?)	Shemaryau	9	14	wine
5. Kešeh	Gaddiyau	9	4-7	wine
6. Azah	Gaddiyau	10	2	Abiba'al 2 Ahaz 2 Sheba' 1 Meriba'al 1
	Gaddiyau	10	17a, b	oil
7. Sak	Gaddiyau	10	16a, b	oil
8. Hašerot	Gaddiyau	10	18	oil
9. Be'er-yam (?)	Shemaryau	10	1	wine Rage' Elisha 2 'Uzza ----- 1 Eliba ----- 1 Ba'ala Elisha [1] Yeda'yan [1]
10. Abi'ezer	Shemaryau	10	13	wine. For Isha --- of ha-Tell
	Isha Ahimelek	15	28	Ba'ala of El-Mattan
11. Kerm ha-Tell	Shemaryau	10	21	oil
	-----	10	20	oil
	Nimshi (?)	15	56	-----
	Bedyau (?)	15	58	-----
12. Shemida'	Ahima	10	3	For Ba'ala B[a'alme'oni ?]
	Ahima	15	37, 39	Isha [Ba'al'azkar]
	Ahima	15	38	'Alah Ela
	[Ahima ?]	15	36	Gera Yauyosheb
	Heleş	15	32	Ahima
	Heleş Gaddiyau	15	30	Gera Hanni'ab
	Heleş Gaddiyau	15	33	----- mnt
	Heleş Gaddiyau	15	35	Yau -----
	[Heleş] Gaddiyau	15	34	S -----
	Heleş Afšah	15	31	Ba'ala Za[kar]
	Isha Ahimelek	15	29	[K]edar of Sak
	A -----	?	40	-----
	-----	17	63	-----
13. Helek	Isha Ahimelek	15	22, 23	Heleş of Hašerot
	Isha Ahimelek	15	24	Rafa 'Animes of Hašerot
	[Isha] Ahimelek	?	25	Ahza' of Hašerot
	Isha Ahimelek	15	27	Ba'ala Ba'alme'oni
	Isha [Ahimelek]	?	26	----- of Hašerot
14. Hoglah	Hanan Ba'ara	15	45, 47	Marnayau Natan of Yašot
	Hanan Ba'ara	15	43, 46	-----
15. No'ah	Gomer	15	50	'Abedyau for Abiyau (?)
16. Shekem	-----	15	44	----- (the wine ?)
	Hannino'am	15?	43	El
17. Sherek	Yeda'yan	15	42	Marnayau Gaddiyau of 'Asherot
	Yeda'yan Ahimelek	15	48	Ye'ush of Yasheb (?)

<sup>1</sup> See condensed form of this Table on page 230.

No. 28, Ba'ala of El-Mattan.  
No. 42, Marnayau Gaddiyau of 'Asharot (?).

*All these twenty-one names must be accepted as designating estates, places, or tribal units.*

c. PERSONAL NAMES

The words which follow the preposition "to" are, on the other hand, clearly names of persons, as may be seen from the table beneath, which gives all the related facts contained in the ostraca:

TABLE OF PAGE 229 IN CONDENSED FORM			
Recipient	Year 9	Year 10	Year 15
Gaddiyau	4	6	..
Heleş Gaddiyau	..	..	4
Shemaryau	1	3	..
Ba'alzamar	1	..	..
Ahino'am	3	1	..
Ahima	..	1	4
Heleş Ahima	..	..	1
Isha Ahimelek	..	..	8
Heleş Afsah	..	..	1
Hanan Ba'ara	..	..	4
Gomer	..	..	1
	9 ostraca to 4 men	11 ostraca to 4 men	23 ostraca to 7 men
Total	43 ostraca	11 men	

TABLE SHOWING THAT NAMES PRECEDED BY "TO" ARE PERSONAL NAMES

To	From	Year	Nos. of Ostraca	
1. Gaddiyau	Keşeh	9	4-7	wine
	Azah	10	17a, b	oil
	Azah	10	2	Abiba'al 2 Ahaz 2 Sheba' 1 Meriba'al 1
2. Heleş Gaddiyau	Sak	10	16a, b	oil
	Haşerot	10	18	oil
	Shemida'	15	30	Gera Hammi'ab
	Shemida'	15	33	----- mnt
	Shemida'	15	34	S -----
3. Shemaryau	Heleş ----- (?)	15	35	Yau -----
	Shemida'	15	32	Ahima
	Azat Par'an	9	14	wine
	Abi'ezer	10	13	wine
	ha-Tell	10	21	oil
4. Ba'alzamar	Be'er-yam (?)	10	1	wine Rage' Elisha 2 'Uzza ----- 1 Eliba ----- 1 Ba'ala Elisha [1] Yeda'yau [1]
5. Ahino'am	Shiftan	9	12	wine
	Gib -----	9	8	wine
	Yaşot	9	9, 10	wine
6. Ahima	Yaşot	10	19	oil
	Shemida'	10	3	wine. For Ba'ala B[a'alme'oni?]
	Shemida'	15	37, 39	Isha [Ba'al'azkar]
	Shemida'	15	38	'Alah Ela
	Shemida'	15	36	Gera Yauyosheb
7. Isha Ahimelek	Abi'ezer	15	28	Ba'ala of El-Mattan
	Shemida'	15	29	[Keldar of Sak
	Helek	15	22, 23	Heleş of Haşerot
	Helek	..	26	----- of Haşerot
	Helek	15	24	Rafa 'Animes of Haşerot
	Helek	..	25	Ahza' of Haşerot
	Helek	15	27	Ba'ala Ba'alme'oni
	Shemida'	15	31	Ba'ala Za[kar]
8. Heleş Afsah	Shemida'	15	31	Ba'ala Za[kar]
9. Hanan Ba'ara	Hoglah	15	45, 47	Marnayau Natan of Yaşot
	[Shekem (?)]	15	43	El -----
10. Gomer	No'ah	15	50	'Abedyau for Abiyau
11. Yeda'yau	Sherek	15	42	Marnayau Gaddiyau of 'Asharot
Yeda'yau Ahimelek	Sherek	15	48	Ye'ush of Yasheb



Heleş, Ahino'am, Ahimelek, Hanan, Ba'ara (fem.), and Gomer (fem.) are Biblical names, while Gaddiyau and Shemaryau are equivalent to Gedaiah and Shemariah. Ba'alzamar is a known Phœnician name, and all the others are etymologically explicable as proper names of persons.

The names at the end of the ostraca of form *c* are likewise clearly proper names of persons. Abiba'al, Ahaz, Sheba', Elisha, 'Uzza, Ela, Gera, Rafa, and Natan are identifiable in the Old Testament as names, and the rest, with one or two exceptions, are recognizable as such from Phœnician parallels or on etymological grounds.

A question arises, however, as to the interpretation of the two names following each other:

- (1) Ba'ala Elisha' (?), No. 1.  
Ba'ala of El-Mattan, No. 28.  
Ba'ala Ba'alme'oni, No. 27.  
Ba'ala Zakar, No. 31.
- (2) Heleş<sup>1</sup> Gaddiyau, Nos. 30, 33, 34, 35.  
Heleş<sup>1</sup> Afşah No. 31.  
Heleş of Haşerot, Nos. 22, 23.
- (3) Isha<sup>1</sup> Ahimelek, Nos. 22-29, [13].  
Isha [Ba'al'azkar], Nos. 37, 39.
- (4) Hanan<sup>1</sup> Ba'ara, Nos. 45, 47.
- (5) 'Alah Ela, No. 38.
- (6) Rage' Elisha', No. 1.
- (7) Gera Yauyosheb, No. 36.
- (8) Marnayau Natan of Yaşot, Nos. 45, 47.
- (9) Rafa 'Animes of Haşerot, No. 24.

Having considered such possibilities as that the first word was a title or a noun, I find the only possible conclusion to be that the relation between the two names is that ordinarily indicated by the use of the words "son of", but often omitted as is the case in modern Arabic usage. That is, Heleş Gaddiyau means Heleş son of Gaddiyau. In the ostraca we have at least three different persons named Ba'ala, and some further description was necessary to distinguish each one. In modern Egyptian practice, the name of the father is usually added as a matter of course, and in keeping our business accounts we have found it necessary in some cases to add the name of the grandfather, the nickname, or the name of the village of origin in order to identify the individual fully.

The question arises as to the significance of the final *n. pr. p.* in ostraca of form *c*. The three

ostraca of form *c*(2), Nos. 3, 11, 13, present the following variations:

No. 3. "In the 10th year. To [Ahim]a. From Shemida'.

A jar of old [wine].

For Ba'ala B[a'alme'oni]."

No. 11. "A jar of [old] wine.

----- no'am."

No. 13. "In the 10th year. From Abi'ezer. To Shemaryau.

A jar of old wine.

For Ish[a ----- ?] of ha-Tell."

#### *d.* SIGNIFICANCE OF OSTRACA

This question raises that of the significance of the ostraca as a whole. It is to be remembered that the ostraca are only temporary notes, not permanent records, and appear to be reduced to the bare essentials. The transactions were frequent, continuing over a period of years, and much must have been understood by the receiver which was not expressed by the sender. For example, No. 53 says, — "wine of Kerm ha-Tell for (2) a jar of fine oil"; but Nos. 54 and 55, which appear to have the same meaning, omit the "for" (2).

The two most important ostraca are Nos. 1 and 2, those of list form *d*. No. 1 uses the words "Jar of old [wine]," and the numerals in the list must in all human probability give the number of jars of wine delivered to, by, or for the account of, the persons named. No. 2 omits the words "jar of old wine," but gives a list like that of No. 1. It seems to me clear that here "jar of old wine" or "jar of fine oil" is to be understood. It is unfortunate that in No. 53 the amount of wine equivalent to a jar of oil is not expressly stated; but as the quantity ordinarily used for each is "a jar," it appears probable that in Nos. 53-55 a jar of wine was exchanged for, or paid instead of, a jar of oil. If this equivalence of "oil" and "wine" be admitted, the omission in No. 2 would be easily comprehensible. Now it is to be noted that the ostraca of form *c*(1) may be combined to form lists of form *d* similar to ostrakon No. 2. For example, ostraca Nos. 22-27 with the same heading may be united to make the following list:

<sup>1</sup> Recipients.

"In the 15th year. From Helek. To Isha, son of Ahimelek.

Nos. 22, 23, 26. Heles of Haserot . . . . . 3  
 No. 24. Rafa son of 'Animes of Haserot . . . 1  
 No. 25. Ahzai of Haserot . . . . . 1  
 No. 27. Ba'ala son of Ba'alme'oni . . . . . 1."

Similarly Nos. 30, 33, 34, and 35 may be combined:

"In the 15th year. From Shemida'. To Heles son of Gaddiyau.

No. 30. Gera son of Hanni'ab . . . . . 1  
 No. 33. [-----]mint (?) . . . . . 1  
 No. 34. S[-----] . . . . . 1  
 No. 35. Yau[-----] . . . . . 1."

So also Nos. 36-39 would form the text:

"In the 15th year. From Shemida'. To Ahima.  
 Nos. 37, 39. Isha son of Ba'al'azkar . . . . . 2  
 No. 38. 'Alah son of Ela . . . . . 1  
 No. 36. Gera son of Yauyesheb . . . . . 1."

Furthermore, if more ostraca of type *c* (2) had been found, they could have been formed into lists like ostracon No. 1. Thus, if it be admitted that "jar of oil" or "jar of wine," being equivalent values, was omitted as unessential from ostracon No. 2, then those words were omitted also from the ostraca of form *c* (1), and the form *c* (1) is merely an abbreviation of form *c* (2). It would remain to be explained, however, why the *n. pr. p.* at the end of form *b* (1) and *b* (3) was omitted. It is to be noted that these ostraca of forms *b* and *c* (2) are exclusively of the years 9 and 10, while those of form *c* (1) are exclusively of the year 15, and a different form may have come into use in the later period. Now, these temporary notes of form *b* (1) and *b* (3) can only refer to payments or deliveries of oil or wine from estates, places, or districts, to certain persons. The possible transactions suggested by the texts are two:

- (1) The jar of wine or oil, being in the palace store from an estate or district, was delivered to a certain person who had a right to payments.

In the case of form *c* (2) the right of claim lay in the second person named, or was to be transferred to him.

But as the ostraca are not receipts, the reason for a clumsy note of this character is not clear.

- (2) The jar of oil or wine was delivered at the palace store, from an estate or district, as due to a certain person (owner, tax official, or tax farmer), and the ostracon was an accompanying note delivered with the jar for entry in the accounts.

In the case of *c* (2), the wine or oil was to be delivered by the first person named to the second person named;

or stored for the second person named;

or credited to the account of the second person named.

For deliveries of this kind, accompanying notes of the character of the ostraca would be almost necessary. It is hardly probable, however, that the real delivery was to be made to the second person, or even stored for his account, but rather credited to him.

I am myself convinced that the ostraca are really accompanying notes (similar to way-bills) sent with the oil or wine. In that case, the payments in form *b* (1) and *b* (3) are credited merely to the district or estate, which would be sufficient if the person named was the owner or a tax official. In forms *b* (2) and *c* (2), the credit was given to certain persons not necessarily from the district or estate, who had assumed responsibility for the payment (as for example, tithe-farmers or tenants). Form *c* (1) is an abbreviation of this form *b* (2) = *c* (2) omitting the words "jar of oil" or "jar of wine" and the preposition  $\text{ב}$  before the name of the second person, but recording the same transaction as the other forms.

Thus I would reconstruct the full text of the ostraca of forms *b* and *c* as follows:

"In the - - - th year. Sent from *n. pr. l.* to *n. pr. p. 1.* A jar of wine (or oil). To be credited to *n. pr. p. 2.*"

## II. DETAILED ACCOUNT WITH TRANSCRIPTIONS

The following list gives a description of each ostracon, with place and date of discovery.

1. Reg. No. 4075. S4-417 N sub, Aug. 23. Fragment from the side of a flaring bowl of reddish brown ware with red wash all over, see Isr. Pott. I 14 i. Broken in two.

Text: בשת העשרת לשם  
ריו מבארים נבל ק  
ישן  
2 רנע אלישע  
1 עוא ק - בש  
1 אלכא  
1 בעלא אלישע  
1 ידעיו

A small fragment is missing from the upper left corner, which bore the end of the  $\text{מ}$  in line 1, and probably the word  $\text{קן}$  in line 2.

2. Reg. No. 4583, S7-776 sub, Sept. 20. Fragment from a great heavy two-handled wine jar of gray ware, see Isr. Pott. I 2 g.

Text: בשת העש  
רת לגריו  
מאזה  
2 אבבעל  
2 אהו  
1 שבע  
1 מרבעל

3. Reg. No. 4614, S7-772 sub, Sept. 22. Fragment from the side and bottom of a bowl, see Isr. Pott. I 14 o. Piece missing from left edge.

Text: בשת העשרת לאחמ  
א משמידע נבל ק  
שן לבעלא ב ---

4. Reg. No. 3855, S4-401 sub, Aug. 11. Fragment from the rim of a bowl, like Isr. Pott. I 14. Part missing, as indicated.

Text: בשת התשעה מק  
צה לגריו נבל  
קן

Note: See the duplicates, Nos. 5, 6, 7.

5. Reg. No. 3863, S4-418 sub, Aug. 12. Fragment from the rim of a bowl, like Isr. Pott. I 14. Broken; piece missing. Inscription perpendicular to rim. Duplicate of No. 4.

6. Reg. No. 3997, S4-417 N, Aug. 19. Fragment from the rim of a bowl, like Isr. Pott. I 14. Duplicate of No. 4.

7. Reg. No. 4578, S7-772, Sept. 20. Fragment from the bottom of a bowl, like Isr. Pott. I 14 and Pl. 55 e 1. Duplicate of No. 4.

8. Reg. No. 3957, S4-416, Aug. 17. Fragment from the rim of a bowl, like Isr. Pott. I 14 and Pl. 55 e 2.

Text: בשת התשעה מנב  
ע לאחמנעם נבל  
קן ישן

9. Reg. No. 4524, S7-772, Sept. 16. Fragment from the bottom of a bowl, like Isr. Pott. I 14. Broken in two; two small fragments missing.

Text: בשת התשעה מי  
צת לאחמנעם  
נבל קן ישן

The fifth letter in line 2 may be  $\text{ב}$ ,  $\text{ר}$  or  $\text{ה}$ .

10. Reg. No. 4580, S7-773, Sept. 20. Fragment from the rim of a flaring round-bottomed bowl of yellow drab ware, see Isr. Pott. I 14 m and Pl. 55 e 4.

Text: a duplicate of No. 9.

Note: The scribe made a mistake in the first line, writing  $\text{ע}$  for  $\text{ש}$  in  $\text{התשעה}$ , and correcting. Lines 2 to 4 have been erased and rewritten. The name in line 2 appears to be  $\text{אבנעם}$ , but the second letter may have been  $\text{ר}$  or  $\text{ה}$ .

11. Reg. No. 4526, S7-772, Sept. 16. Fragment from a bowl like Isr. Pott. I 14.

Text: נבל קן  
נעם ---

12. Reg. No. 4525, S7-772, Sept. 16. Fragment from a flaring bowl of drab ware, see Isr. Pott. I 14 l. Piece missing.

Text: בשת התשעה  
משפתן לבעל  
זמר נבל קן  
ישן

Note: Apparently this was written on the lower blank part of an older ostrakon. The written part was broken off except for the traces of  $\text{קן}$ .

13. Reg. Nos. 4030 + 4032, S4-417 N, Aug. 22. Fragment of a large jar, probably a two-handled jar, of hard gray ware baked to a

pinkish buff surface inside and out. Diameter of jar about 46 cm. See Isr. Pott. I 3 e.

Text: בשת העשרת מאבע  
ור לשמריו נבל  
ין ישן לאשא  
מחתל-----

14. Reg. No. 4608, S7-772, Sept. 22. Fragment from the side of a grayish drab bowl like Isr. Pott. I 14. Broken in three pieces.

Text: בשת התשעה מא  
תפראן לשמריו  
נבל ין ישן

At the end of line 1, ב may be the missing letter instead of י.

15. Reg. No. 4607, S7-772, Sept. 21. Small fragment from a bowl.

Text: מחצרת ל----  
נבל ין ישן---

16. (a) Reg. No. 3891, S4-417, Aug. 15. Fragment from the side of a large (two-handled?) jar of gray ware, see Isr. Pott. I 3 a.

Text: בשת העשרת מס  
ק לגריו נבל  
שמן רחץ

(b) Reg. No. 3898, S4-418, Aug. 15, is a duplicate.

17. (a) Reg. No. 3894, S4-417, Aug. 15. Fragment from the side of a large (two-handled?) jar of gray ware, see Isr. Pott. I 3 a and Pl. 55 d.

Text: בשת העשרת מאו  
ה לגריו נבל שמ  
ן רחץ

(b) Reg. No. 3899, S4-418, Aug. 15, is a duplicate; but as a piece is missing, we have only the last six letters of line 1, and the last seven letters of line 2. See Isr. Pott. I 3 b.

18. Reg. No. 3931, S4-417, Aug. 16. Fragment of a large (two-handled?) jar of hard gray ware. See Isr. Pott. I 3 c and Pl. 55 e.

Text: בשת העשרת מחצרת  
לגריו נבל שמן  
רחץ

19. Reg. No. 4031, S4-417 N, Aug. 22. Fragment of a large (two-handled?) jar of gray ware. See Isr. Pott. I 3 f.

Text: בשת העשרת  
מיצת נבל  
שמן רחץ ל  
אחנעם

20. Reg. No. 3995, S4-417 N, Aug. 19. Fragment of a large (two-handled?) jar of gray ware, see Isr. Pott. I 3 d. Left half gone.

Text: בשת העשרת ל---  
מכרם התל נבל ש  
מן רחץ-

21. Reg. No. 3889, S4-417, Aug. 15. Fragment of a large (two-handled?) jar of hard gray ware, see Isr. Pott. I 3 a. Broken in two.

Text: בשת העשרת לשמר  
יו מחתל נבל ש  
מן רחץ

22. Reg. No. 3932, S4-417, Aug. 16. Fragment from just below the handle of a small jug of burnished red ware with a pink surface outside and a yellow surface inside, see Isr. Pott. I 7 c and Pl. 55 e 5.

Text: בשת אר מח  
לק לאשא אח  
מלך  
חלץ מחצרת

Duplicate of No. 23.

23. Reg. No. 3917, S4-417, Aug. 15. Fragment of a great heavy jar of coarse blackish gray ware. See Isr. Pott. I 2 c.

Text: Duplicate of No. 22.

Note: The letters are very difficult to distinguish; but the text is, in my opinion, certain.

24. Reg. Nos. 3865 + 3866, S4-418, Aug. 12. No. 3865 consists of five fragments joined together. No. 3866 consists of two fragments which do not join. These fragments are from the side of a flaring bowl of pinkish drab ware, covered inside and out with a

dark red wash (not burnished), like Isr. Pott. I 14.

Text: בשת אד מחלק לאשא אחמלך  
רפא ענמש מהצרת

Note: The name 'Animes' is apparently Egyptian.

25. Reg. Nos. 4079 + 4080, S4-417 N, Aug. 23. Fragment from the side of a flaring flat-bottomed bowl of reddish brown ware with red wash, like Isr. Pott. I 14 or 15. Upper part missing.

Text: בשת אד מחלק לאשא  
אחמלך  
אחוי מ  
הצרת

The restorations fill out the outline of the original ostrakon as indicated by the breaks.

26. Reg. No. 3873, S4-418, Aug. 13. Fragment from the side of a small bowl with upright sides of brown ware with dull burnished red wash, see Isr. Pott. II 16 a.

Text: בשת אד מחלק לאשא אחמלך  
לחלץ ה - מוצרת

Note: The ink has not adhered well to the burnished surface, and the fragment is very difficult to read.

27. Reg. No. 4553, S7-773, Sept. 19. Fragment from the side of a bowl of red-brown ware with red wash, like Isr. Pott. I 14.

Text: בשת אד מחלק לאשא  
אחמלך  
בעלא בעלמעני

28. Reg. No. 4552, S7-773, Sept. 19. Fragment from the side of a flaring bowl of red-brown ware with red wash, like Isr. Pott. I 14. Broken in three pieces.

Text: בשת אד מאבעור לאשא  
א אחמלך  
בעלא מאלמתן

29. Reg. Nos. 4555 + 4556 + 4579, all from S7-773, Sept. 19. Three fragments of a potsherd broken from the side of a hollow

bowl of red ware, red wash, see Isr. Pott. I 15 a.

Text: בשת אד משמידע לאשא  
אחמלך  
קדר מסק

30. Reg. No. 3900, S4-417, Aug. 15. Fragment from the rim of a flaring bowl of red ware with red wash, like Isr. Pott. I 14. In two pieces. Small pieces missing from left and bottom.

Text: בשת אד משמידע  
לחלץ גריו  
גרא חנאב

31. (a) Reg. No. 3895, S4-417, Aug. 15. Fragment from a flaring bowl of reddish brown ware with red wash, like Isr. Pott. I 14.

Text: בשת אד משמידע  
לחלץ אפצח  
בעלא זכר

- (b) Reg. No. 3992, Aug. 16. Fits on the lower part of No. 3895, as indicated in the plate, and bears an inscription beginning:

Text: בשת אד משמיד  
ע ל - - - - -

Perhaps a duplicate of Reg. No. 3895 (= No. 31a).

32. Reg. No. 3916, S4-417, Aug. 15. Fragment from the side of a great heavy jar of blackish gray ware, see Isr. Pott. I 2 b.

Text: בשת אד משמידע  
לחלץ  
אחמא

The black surface makes the letters very difficult to read. I could not distinguish even a trace after the first word in either of the last two lines.

33. Reg. No. 3909, S4-417, Aug. 15. Fragment of a jug of reddish yellow ware, see Isr. Pott. I 7 b.

Text: בשת אד משמיד  
ע לחלץ גריו  
מנת - - - - -

In line 3, read מ or ש.

<sup>1</sup> Omitted by error of ancient scribe.

34. Reg. Nos. 3903 + 3933, S4-417, Aug. 15 and 16. Fragments from a small jar of reddish brown ware with drab surface, see Isr. Pott. I 7 d.  
Text: בשת האר משמירע  
לחלץ נדיו צ ---
35. Reg. Nos. 3913 + 3914, S4-417, Aug. 15. Fragments from the rim of a flaring bowl of gray ware with reddish brown surface and red wash (faded), like Isr. Pott. I 14.  
Text: בשת אר משמירע  
לחלץ נדיו  
---- י
36. Reg. Nos. 3902 + 3906, S4-417, Aug. 15. Fragments from a small jar of reddish brown ware with a drab surface outside and a yellow surface inside, see Isr. Pott. I 7 a.  
Text: בשת האר משמירע  
לאחמא  
לנרא יישוב ---
- Note: I restore as above because the space in line 2 does not seem sufficient for לחלץ נדיו.
37. Reg. No. 4551, S7-773, Sept. 19. Fragment from the rim of a flaring bowl of reddish brown ware with red wash, like Isr. Pott. I 14. In two pieces.  
Text: בשת אר משמירע  
לאחמא  
אשא בעלעזכר
38. Reg. No. 3993, S4-417, Aug. 19. Fragment from the side of a flaring bowl of reddish brown ware with a red wash, see Isr. Pott. I 14 h.  
Text: בשת אר משמירע  
דע לאחמא  
עלה אלא
- Note: The first letter in line 3 is either ע or ד.
39. Reg. No. 4619, S7-772, Sept. 22. Fragments from a bowl of red-brown ware with red wash, see Isr. Pott. I 19 a.  
Text: Apparently a duplicate of No. 37, q. v.
40. Reg. No. 4527, S7-772, Sept. 16. Fragment from the rim of a hollow bowl of drab ware, see Isr. Pott. I 18 a.  
Text: משמירע לע ---
41. Reg. No. 4550, S7-776, Sept. 19. Fragment from the end of an ostrakon, from the bottom of a flaring bowl of yellow drab ware with red wash inside, like Isr. Pott. I 14.  
Text: שיע עגליו ----
42. Reg. No. 3994, S4-417 N, Aug. 19. Three fragments from the side of a flaring bowl of reddish brown ware with heavy red wash, like Isr. Pott. I 14. Pieces missing from upper right and lower left corners.  
Text: בשת אר משרק  
לירעיו  
מרניו גריו  
מעשרת ---
43. Reg. No. 3875, S4-418, Aug. 12. Fits on No. 44, and must therefore be from the same place, Shechem. From the rim of a flaring bowl of reddish brown ware with red wash, like Isr. Pott. I 14.  
Text: בשת האר משמירע ל  
חלץ בערא  
אל -----
44. Reg. No. 3867, S4-418, Aug. 13. Fits on No. 43, q. v.  
Text: בשת האר משמירע  
ל ----- חפ-ר  
הין -----
- Note: It is impossible to determine the middle letter in חפ-ר, while the first letter may be ב or פ.
45. Reg. No. 3896, S4-417, Aug. 15. Fits on No. 46, and appears to be a duplicate of No. 46 and also of No. 47. Fragment of a flaring bowl of reddish brown ware with red wash, like Isr. Pott. I 14. See Nos. 46 and 47.  
Text: בשת האר מחגלה  
לחלץ בערא מר  
יו נתן מיצח

46. Reg. No. 3915, S4-417, Aug. 15. Part of same bowl as No. 45, and fits No. 45. See No. 47, and 45.

Text:                   בשת אר מחגלה  
                          לחנן בערא  
                          -----א

47. Reg. No. 4616, S7-772, Sept. 22. Fragment of a flaring bowl of red-brown ware with red wash, like Isr. Pott. I 14.

Text:                   בשת אר מחגלה לחנן בערא מ  
                          רני נתן מיצת

48. Reg. Nos. 3897 + 3990 B. No. 3897 was found in S4-418 on Aug. 15, and No. 3990 in S4-417 N on Aug. 19. Fit No. 49, part of a bowl. From the rim of a flaring bowl of hard reddish brown ware with red wash, like Isr. Pott. I 14.

Text:                   בשת אר משרק לידעיו  
                          אחמלך  
                          יעש מישב

49. Reg. No. 3990 A, S4-417 N, Aug. 19. Part of same bowl as No. 48.

Text:                   בשת אר מצמיד  
                          ע לחלק נדיו  
                          מזי-----  
                          כסר

In very bad condition; copy unreliable. Line 3 might be read ---מצי, and line 4, כרר or כאר.

50. Reg. No. 4630, S7-772 N, Sept. 23. From the bottom of a bowl with a ring-base, of drab ware (faded red wash?), see Isr. Pott. I 20 b.

Text:                   בשת אר לגמר מנעה  
                          עבריו לאביו

The last word may be לאריו.

51. Reg. No. 4661, S7-772 W, Sept. 26. Fragment from the rim of a bowl of brown ware with a red wash, like Isr. Pott. I 14 and Pl. 55 e 3.

Text:                   בשת העשרת ל-----  
                          -----  
                          אחא היהדי-----

52. Reg. No. 4629, S7-772, Sept. 23. Fragments from the rim of a bowl of brown ware with red wash, see Isr. Pott. I 14 n.

Text:                   באר חב-----  
                          אביו-----

Note: The ת following the numeral is, I think, an erasure. Originally שט was written, omitting the numeral, and erased to admit the numeral. Possibly the traces which I took to be ת are of the letter מ, see No. 50, above.

53. Reg. No. 3890, S4-417, Aug. 15. Fragment from a large (two-handled?) jar of hard gray ware, like Isr. Pott. I 3 a.

Text:                   בשת העשרת ין  
                          כרם החל בנבל שמן  
                          רחץ

54. Reg. No. 4171, S7-723, Sept. 1. Fragment from a large (two-handled?) jar of hard gray ware, see Isr. Pott. I 3 g.

Text:                   בשת העשרת ין כ  
                          רם החל נבל שמן רח  
                          ץ

55. Reg. No. 4660, S7-772 W, Sept. 26. Fragment from a large (two-handled?) jar of hard gray ware, see Isr. Pott. I 3 i.

Text:                   בשת העשרת כר  
                          ם יחועלי נבל  
                          שמן רחץ

56. Reg. No. 4617, S7-772, Sept. 22. Fragment from the rim of a flaring bowl of brown ware with burnished red wash, see Isr. Pott. II 11 f. Parts missing.

Text:                   בשת אר מהתל  
                          לגמש  
                          רל-----ער--

The letters in line 3 are uncertain.

57. Reg. No. 4582, S7-776, Sept. 20. Fragment from the side of a large thin-walled jar of gray ware, see Isr. Pott. I 3 h.

Text:                   עברא-----י  
                          נא שמדע-----  
                          י-----

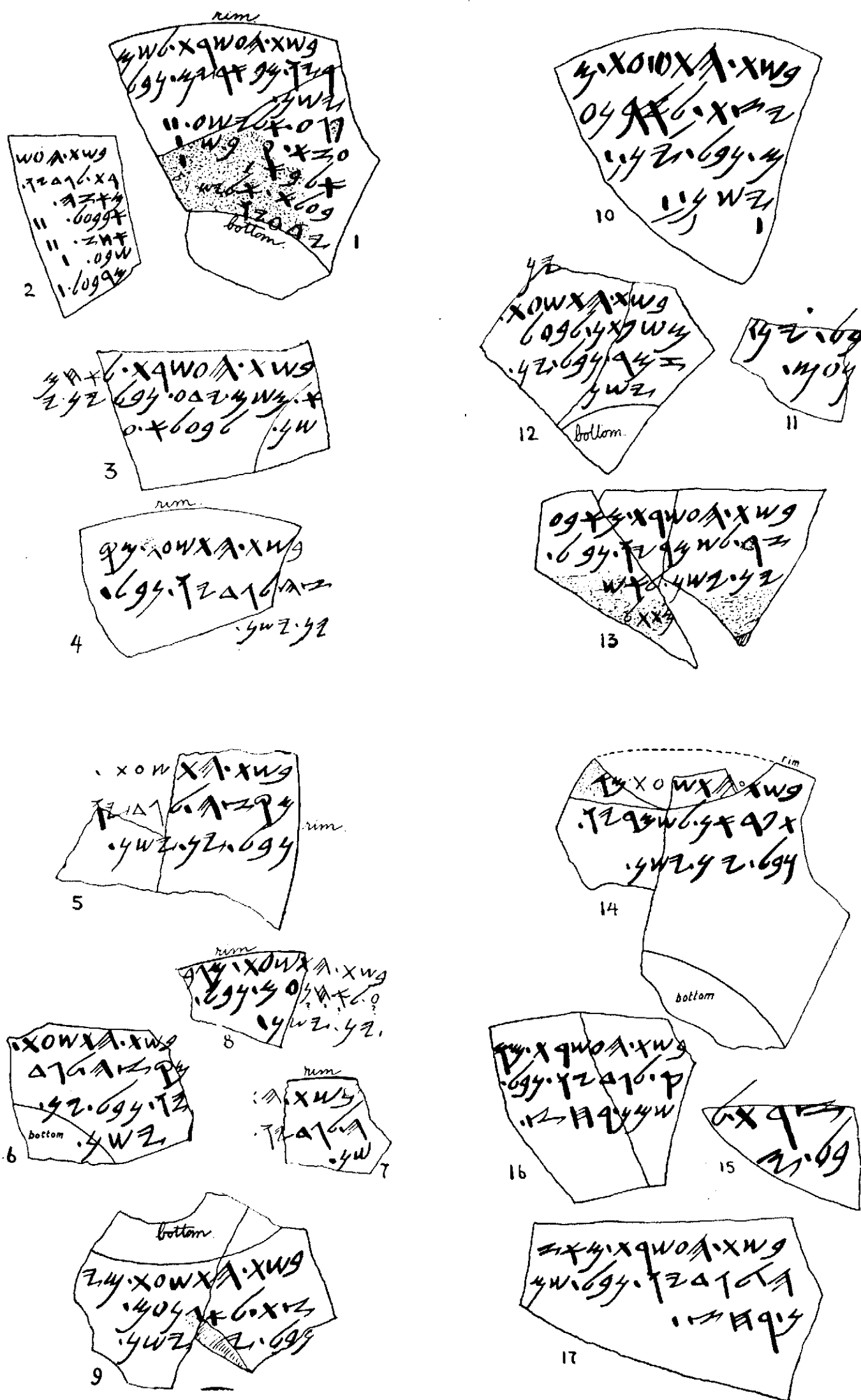
Note: The second word in line 2 appears to be שמידע with the letter י omitted. The

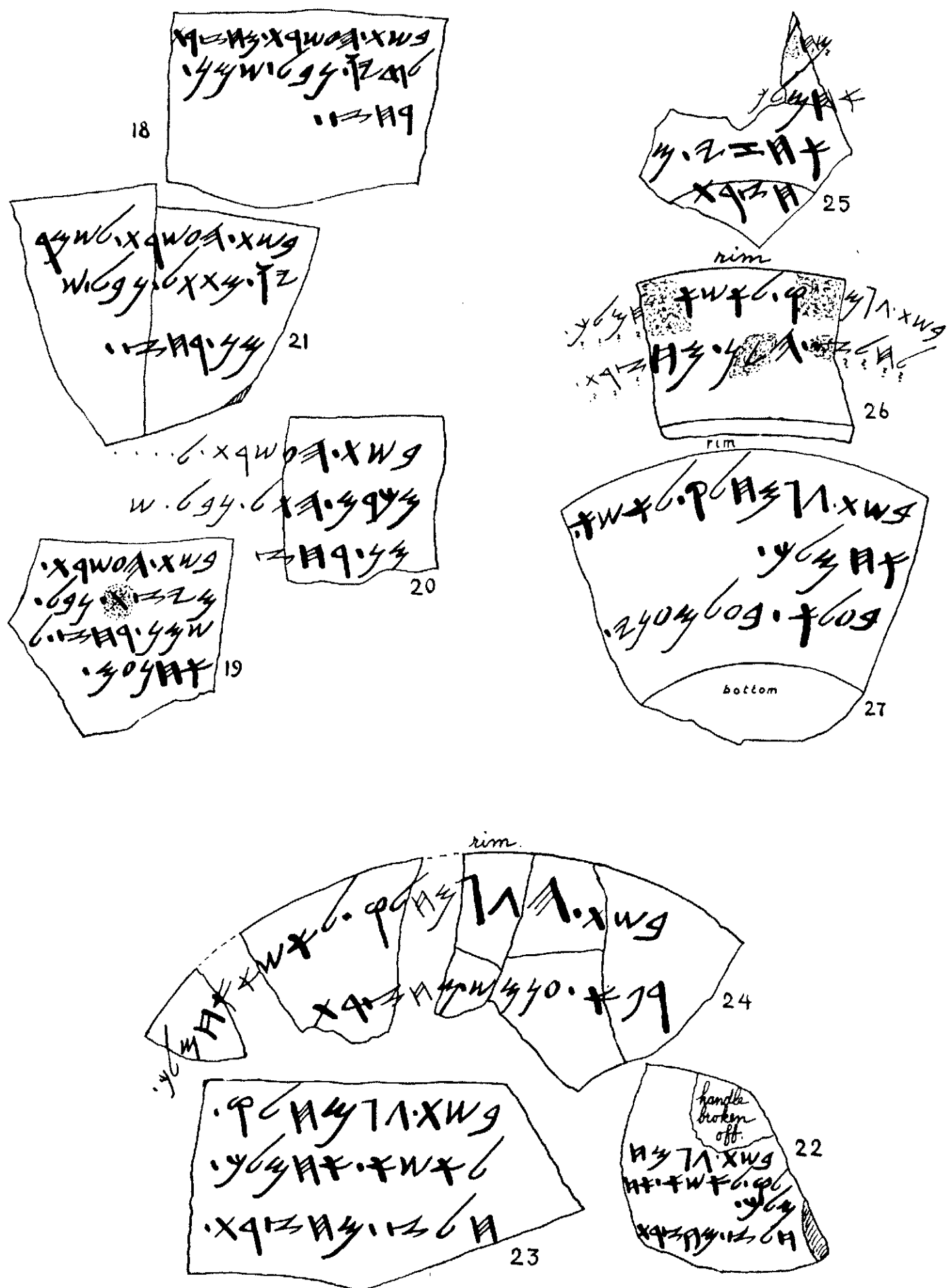
- sign at the end is like the numeral 5 or the letter  $\aleph$ .
58. Reg. No. 4554, S7-773, Sept. 19. Three fragments of a complete ostrakon from the rim of a bowl of brown ware with red wash, like Isr. Pott. I 14.  
Text:  $\text{בשת אר לברין}$   
 $\text{כרם התל}$
59. Reg. No. 4581, S7-776, Sept. 20. Fragment from a large heavy jar of gray ware, see Isr. Pott. I 2 f. In two pieces. Lower left corner missing.  
Text:  $\text{נבל שמן רה}$   
 $\text{ץ בשת אר}$
60. Reg. No. 4627, S7-772, Sept. 23. Fragment from the side of a hollow bowl of brown ware with red wash, see Isr. Pott. I 15 b.  
Text:  $\text{כרם יחועל}$
61. Reg. No. 3864, S4-418, Aug. 12. Fragment from a large coarse jar, see Isr. Pott. I 2 a. Complete.  
Text:  $\text{כרם התל}$   
 $\text{בשת אר}$
62. Reg. No. 3934, S4-417, Aug. 16. Large potsherd from a great heavy jar, see Isr. Pott. I 2 d. A large fragment from the side of a jar, bearing a label.  
Text:  $\text{ין שמירע}$
63. Reg. No. 3991, S4-417 N, Aug. 19. Potsherd from a great heavy jar, see Isr. Pott. I 2 e. A large fragment bearing a label.  
Text:  $\text{בשת אר}$   
 $\text{משמירע}$
- In addition to the Israelite ostraca, two potsherds (Nos. 64, 65, below) were found with incised (scratched) Israelite letters. The forms of the letters are not essentially different from those of the letters of the ostraca.
64. Reg. No. 2854. Picked up by Mr. Oric Bates, June 18, 1910, on the surface of a field, southern slope of the hill between Street of Columns and Herodian Wall. Rim of large platter, of red ware, black core, red wash, pebble burnish, see Isr. Pott. II 18 a and Pl. 55 a. The rim is 5.5 cm. wide and bears on upper surface:  
 $\text{למלכרם}$
65. Reg. No. 4925, S11-9 in disturbed yellow debris just in front of mouth of cave, Oct. 22, 1910. Rim of a bowl with bent sides, of brown ware, red wash, even pebble burnish, see Isr. Pott. II 12 c and Pl. 55 b. The letters are scratched on outside of rim, upside down with reference to natural position of bowl:  
 $\text{ליה}$
66. See the Israelite seal impression on the cuneiform tablet, Reg. No. 1825.
67. Israelite letters, probably quarry marks, were found on ten large building stones of the Israelite period, see Part III, Chapter I 1 e.

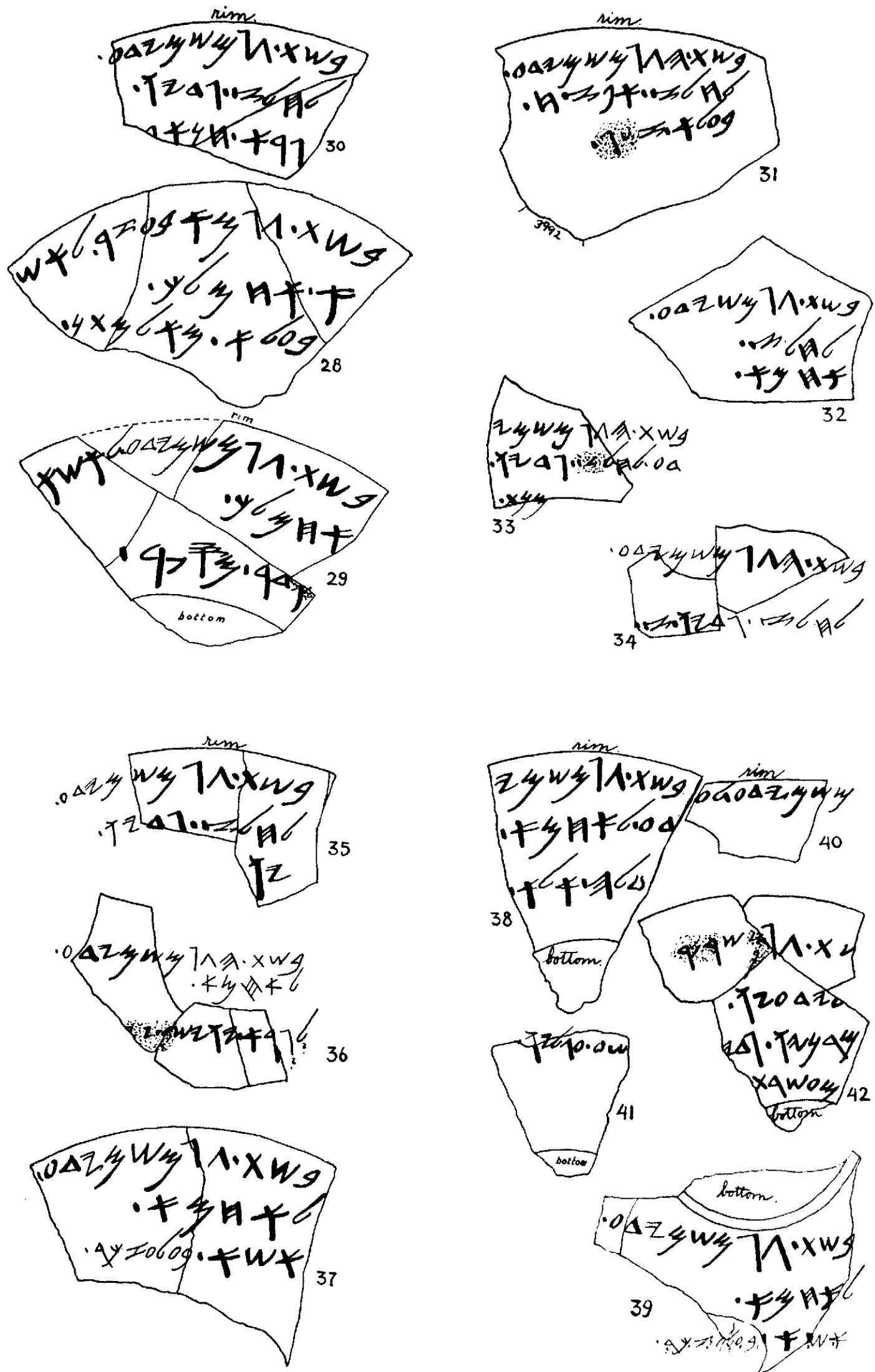
On the following lithographed pages are given the ostraca in the ancient script, with some obvious and other probable restorations; a table showing the various forms of the letters on the ostraca; Nos. 64 and 65 of the preceding list; and the Osorkon vase.

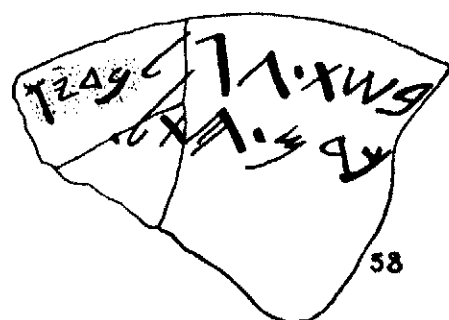
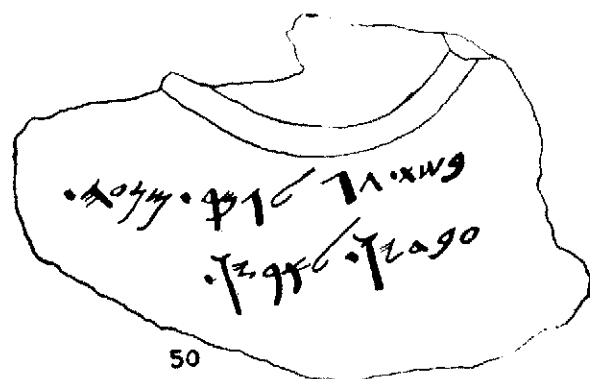
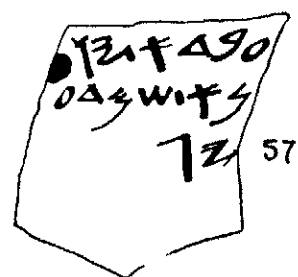
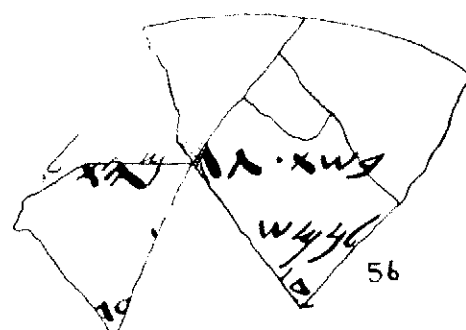
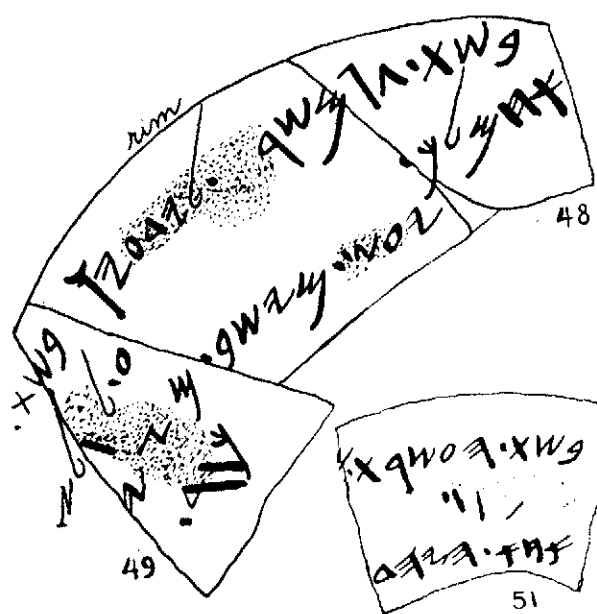
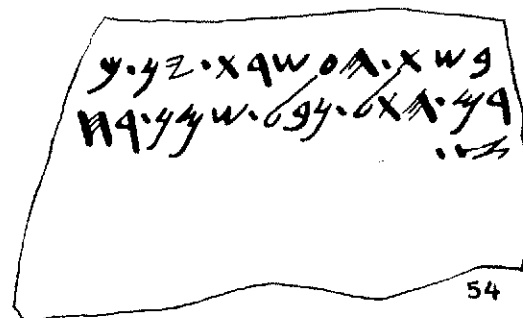
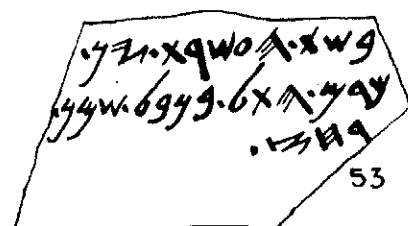
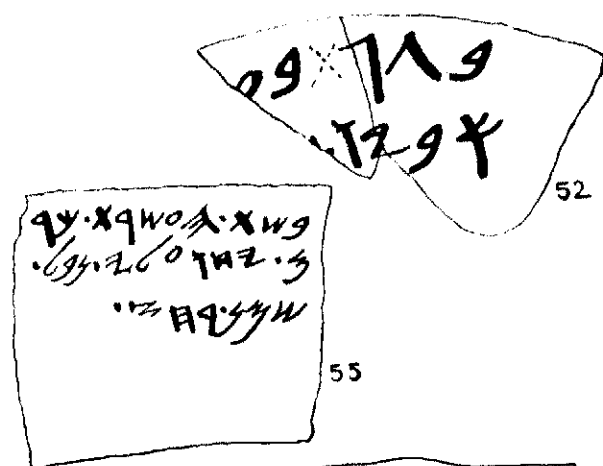
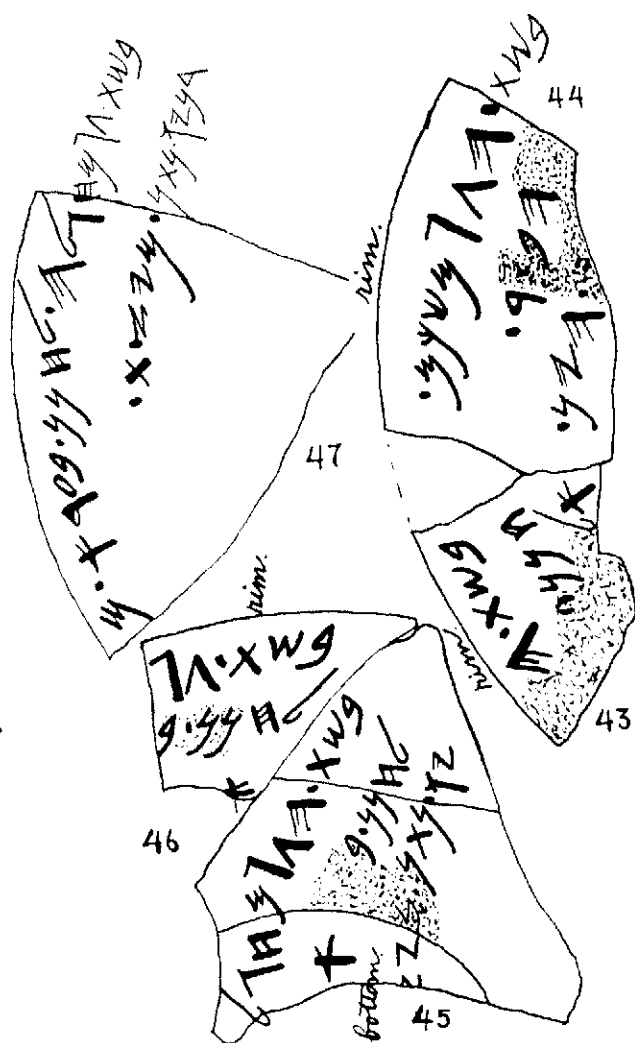


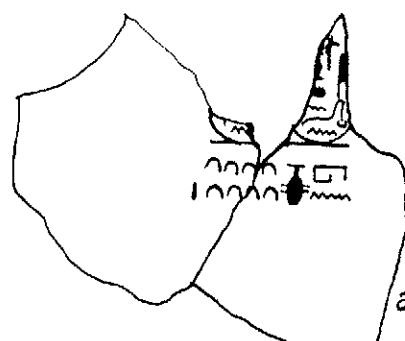
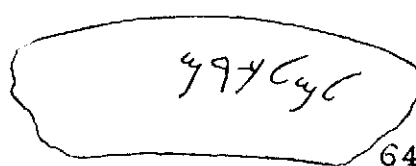
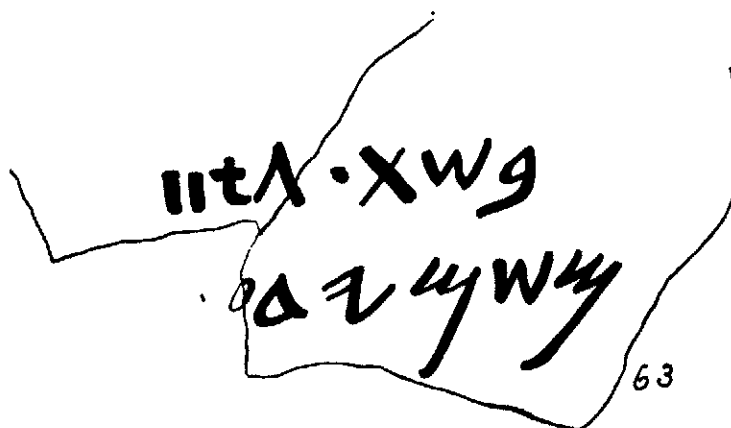
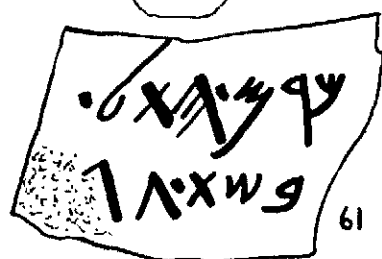
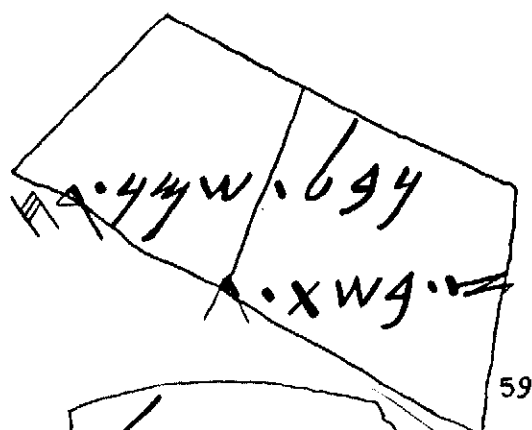
## III. OSTRACA IN FACSIMILE



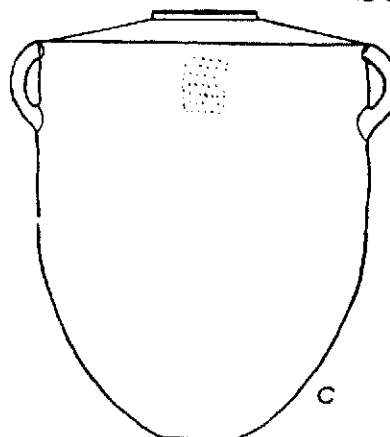








a, b, c - OSOMON VASE



א	𐤀	ב	𐤁
ב	𐤂	ג	𐤃
ג	𐤄	ד	𐤅
ד	𐤆	ה	𐤇
ה	𐤈	ו	𐤉
ו	𐤊	ז	𐤋
ז	𐤌	ח	𐤍
ח	𐤎	ט	𐤏
ט	𐤐	י	𐤑
י	𐤒	כ	𐤓
כ	𐤔	ל	𐤕
ל	𐤖	מ	𐤗
מ	𐤘	נ	𐤙
נ	𐤚	ס	𐤛
ס	𐤜	ע	𐤝
ע	𐤞	פ	𐤟
פ	𐤠	צ	𐤡
צ	𐤢	ק	𐤣
ק	𐤤	ר	𐤥
ר	𐤦	ש	𐤧
ש	𐤨	ת	𐤩

OSTRACA ALPHABET

<sup>a</sup> 0 9 1 7 7 7 7 7 7 7  
<sup>b</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>c</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>d</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>e</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>f</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>g</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>h</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>i</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>j</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>k</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>l</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>m</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>n</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>o</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>p</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>q</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>r</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>s</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>t</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>u</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>v</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>w</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>x</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>y</sup> 7 7 7 7 7 7 7 7 7 7  
<sup>z</sup> 7 7 7 7 7 7 7 7 7 7

הַלֵּלָה : n. pr. l. Hōglah, Nos. 45, 46, 47.  
הוּרָה : see יִחְזַעְלִי.  
הֶלֶץ : n. pr. p. Heleş, a recipient, son of Gaddiyau, Nos. 30, 33, 35, and 49; a recipient, No. 32; a recipient, son of Afsah, No. 31; of Ḥaṣerot (?), Nos. 22, 23; see also No. 26.  
הֶלֶק : n. pr. l. Helek, Nos. 22–27.  
חַנַּאב : n. pr. p. Ḥanni'ab, father of Gera, No. 30.  
הַנָּן : n. pr. p. Ḥanan, a recipient, son of Ba'ara, Nos. 43, 45–47.  
חַנְנֵעַם : n. pr. p. Ḥannino'am, a recipient, No. 43.  
חַשְׁרֹת : n. pr. l. Ḥaṣerot No. 18 (מַחְשֶׁרֶת לְנָרִי), No. 15. — (חֶלֶץ מַחְשֶׁרֶת) (--- ל-מַחְשֶׁרֶת), Nos. 22, 23 (חֶלֶץ מַחְשֶׁרֶת); No. 24 (רַפָּא עֲנִמְשׁ מַחְשֶׁרֶת), No. 25 (אֲחִזִּי מַחְשֶׁרֶת), No. 26 (חֶלֶץ-חֶלֶץ-מַחְשֶׁרֶת).

- י : see שמירע, ידעני, יידע.  
 ידעני : n. pr. p. Yeda'yau [Jedaiah], a recipient, No. 42; a recipient, son of Ahimelek, No. 48.  
 יה : see No. 65.  
 יהדי : "Judean," No. 51.  
 יו : see שמרי, ענליו, עבריו, מרני, ידעני, גריו, אביו, יושב, יידע.  
 יידע : n. pr. p. Yauyada' [Joiada, Jehoiada], No. 65.  
 יושב : n. pr. p. Yauyosheb, No. 36.  
 : n. pr. p. Nos. 35, 57.  
 יהועלי : in the name of a garden, Nos. 55, 60.  
 ים : "west" in בארים, No. 1. (?)  
 ין : "wine," in Nos. 53, 54 (ין כרם החל), No. 62 (נבל ין ישן), Nos. 1, 3-10, 12, 13, 14, 69 (ין שמירע), No. 26 (הין), No. 44 (הין). See also No. 12, above, and No. 11. In Nos. 26 and 44, perhaps = "vintner."  
 יעש : n. pr. p. Ye'ush, of Yasheb, ? No. 48.  
 יצת : n. pr. l. Yašot, Nos. 9, 19; Marnayau, son of Natan of Yašot, Nos. 45, 47.  
 ישב : n. pr. l. Yasheb?, No. 48.  
 ישן : "old," Nos. 1, 3, 10, 12, 13, 14 (old wine).  
 ישע : see אלישע.

## כ

- כסר : see No. 49, end.  
 כרם : "garden," Nos. 13, 20, 21, 53, 54, 58, 61 (כרם החל), Nos. 55, 60 (כרם יהועלי).  
 כרר : doubtful reading, No. 49, end.

## ל

- ל : prep. "to," "belonging to." In the formulas ל is followed by the name of a person called in this register a recipient, see variation in Nos. 3, 11, 13. Further, possibly No. 50: — עבריו לאביו, 'Abedyau belonging to Abiyau. See also Nos. 64 and 65.  
 לאביו : n. pr. p. father of 'Abedyau, No. 50.

## מ

- מ : prep. "from." In the formulas מ is followed by the name of a place or tribal district. Further, with names of places to designate origin of persons or things.  
 מי : see No. 49, line 3.  
 מלך : see אחמלך.  
 מלכרם : n. pr. p. No. 64 ?  
 מנת : doubtful reading, No. 33, end.  
 מרבעל : n. pr. p. Meriba'al, No. 2.  
 מעשרת : "tithes," a possible reading in No. 42, line 4. — see עשרת.  
 מרני : n. pr. p. Marnayau, son of Gaddiyau, No. 42, son of Natan, Nos. 45, 47.  
 מתן : see אלמתן, No. 28.

## נ

- נבל : "jar," — a large two-handled jar for storing wine, oil, or even grain, the equivalent of the modern *gerra*, Nos. 1, 3-15 (נבל ין ישן); Nos. 16-21, 53, 54, 56, 59 (נבל שמן רחין). In No. 1, possibly a plur. constr.  
 נמשי : n. pr. p. Nimshi, a recipient, No. 56.  
 נעם : see חננעם, אחננעם.  
 נעה : n. pr. l. No'ah, No. 50.  
 נתן : n. pr. p. Natan, father of Marnayau, Nos. 45, 47.

## ם

- םק : n. pr. l., Nos. 16, 29.

## ע

- ע : n. pr. p., No. 40.  
 עברא : n. pr. p. 'Abda, No. 57.  
 עבריו : n. pr. p. 'Abedyau [Obadiah], No. 50, son of Abiyau, cf. No. 52. (?)  
 ענליו : n. pr. p. 'Agalyau, 'Egelyau, No. 41; cf. א, Elisha.  
 עור : see אבעור.  
 עזא : n. pr. p. 'Uzza, No. 1.  
 עוכר : for אוכר, see בעלעוכר.  
 עלה : n. pr. p., son of Ela, No. 38; see also No. 40.  
 ענמש : n. pr. p. 'Animes (Egyptian ?), No. 24.  
 עשרת : "tenth" (fem.), Nos. 1, 2, 13, 16-21, 51, 53-55.  
 עשרת : n. pr. l. (?), 'Asharot, No. 42. The incomplete state of the ostrakon makes it possible to read מעשרת "tithes."

## פ

- פראן : plu. of פרא "wild ass" ? in the n. pr. l. אוחפראן, No. 14.  
 פ ר : doubtful reading in No. 44.

## צ

- צ : n. pr. p., No. 34.

## ק

- קדר : n. pr. p. Kedar, No. 29.  
 קצה : n. pr. l. Kešeh, Nos. 4, 5, 6, 7.  
 קביש : n. pr. p., father of 'Uzza, No. 1.

## ר

- רנע : n. pr. p. Rage', son of Elisha', No. 1.  
 רחין : "fine" (?), applied to oil, Nos. 16-21, 51, 53, 54, 55, 59, 67.  
 רשא : n. pr. p. Rafa, a son of 'Animes, No. 24.

## ש

- שבע : n. pr. p. Sheba', No. 2.  
 שכם : n. pr. l. Shekem, No. 44, and perhaps No. 43.  
 שמירע : n. pr. l. Shemida', Nos. 3, 29, 31-40, 63 and possibly No. 49; "wine of Shemida'," No. 62. See also No. 57.

שמן : "oil," Nos. 16-21, 51, 53, 54, 55, 59.  
 שמרי : n. pr. p. Shemaryau [Shemariah], a recipient,  
 Nos. 1, 13, 14, 21.  
 שפתן : n. pr. i. Shiftan, No. 12.  
 שרק : n. pr. l., Nos. 42, 48.  
 שנה : "year."  
 בשנת החישעה, Nos. 4-10, 12, 14.  
 בשנת העשרה, Nos. 1, 2, 3, 13, 16-21, 51, 53, 54, 55.  
 בשנת הארבע, Nos. 24, 31, 33, 34, 44, 45.  
 בשנת ארבע, Nos. 22, 23, 27-30, 32, 35, 37, 38, 39,  
 42, 46, 48, 50, 56, 58, 59, 61.  
 בארבע, No. 52.  
 בארבע, No. 63.

ה : "hill," always היל, n. pr. l., Nos. 20, 53, 54,  
 58, 61 (כרם היל), No. 56 (מחלת), Nos. 13, 21  
 (מחלת).  
 חשעה : "ninth" (fem.), Nos. 4-10, 12, 14.

## Incomplete readings:

ן----- : No. 26.  
 מנת----- : No. 33.  
 ש----- : No. 41.  
 ר----- : No. 56.  
 ע----- : No. 56.  
 נא----- : No. 57.  
 י----- : No. 57.

<sup>1</sup> A small hill in the valley west of Samaria is still called Et-Tell.

## V. INDEX OF ISRAELITE INSCRIPTIONS ACCORDING TO REGISTRATION NUMBERS

A cross (+) indicates that the number which it follows is joined with another number to form the ostrakon in question. The ostraca which have no list number were illegible.

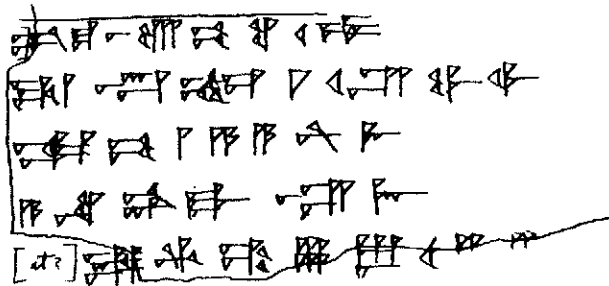
Reg. No.	List No.	Reg. No.	List No.	Reg. No.	List No.	Reg. No.	List No.	Reg. No.	List No.
1825	66	3894	17a	3933+	34	4040	..	4578	7
		3895	31a	3934	62			4579++	29
2854	64	3896	45	3935	..	4075	1	4580	10
		3897+	48			4076	..	4581	59
3855	4	3898	16b	3957	8	4077	..	4582	57
		3899	17b	3958	..	4078	..	4583	2
3863	5	3900	30			4079+	25	4584	..
3864	61	3901	..	3990	48-49	4080+	25		
3865+	24	3902+	36	3991	63	4081	..	4607	15
3866+	24	3903+	34	3992	31b	4082	..	4608	14
3867	44	3904	..	3993	38	4083	..	4609	..
3868	..	3905	..	3994	42	4084	..		
		3906+	36	3995	20			4614	3
3873	26	3907	..	3996	..	4171	54	4615	..
3874	..	3908	..	3997	6			4616	47
3875	43	3909	33	3998	..	4524	9	4617	56
3876	..	3910	..	3999	..	4525	12		
3877	..	3911	..	4000	..	4526	11	4619	39
3878	..	3912	..			4527	40		
3879	..	3913+	35	4030+	13			4627	60
3880	..	3914+	35	4031	19	4550	41	4628	..
3881	..	3915	46	4032+	13	4551	37	4629	52
		3916	32	4033	..	4552	28	4630	50
3889	21	3917	23	4034	..	4553	27		
3890	53			4035	..	4554	58	4660	55
3891	16a	3930	..	4036	..	4555++	29	4661	51
3892	..	3931	18	4037	..	4556++	29		
3893	..	3932	22	4038	..	4557	..	4925	65



## B. CUNEIFORM INSCRIPTIONS

1. Fragment of a letter tablet (see Pl. 56 b).  
Reg. No. 1825. Found in the construction trench of the Greek Fort Wall at the eastern angle in S2 S. Fine brown clay, baked. Five lines of cuneiform writing and half the impression of an Israelite seal.

Text:



1. [shu]m-ma ina lib-bi ûmi 10gan
2. sha arhuAbi mNergal-tal(?) -lim(?)
3. ikab-bi mAbi-ahipl.
4. a-na amilurab-alânipl.
5. [it]-ta-din alpu 6 immeru 12 +

1. If by the 10th day
2. of the month Ab Nergaltallim(?)

3. shall say (command?), Abiahi
4. to the Governor of the cities
5. shall(?) give (deliver) 6 oxen 12 sheep +

Note: It seems probable that the last half of the second line and the first part of the third line have been rewritten, and that the text as given above was written at the second attempt. The third sign from the end in line 2 seems to be *gur* rather than *lam*.

Seal: On the fragment is the impression of a round seal with an object (plant, altar?). On the right downward, - - 𐎶𐎵, perhaps the name in the cuneiform text, Abi-ahî.

2. Letter seal, Reg. No. 2925, with one line of cuneiform signs above, and the same repeated below, see Pl. 56 a.

Text:



a-na m ite A[shur - - - - - iddi]-in.

## C. HIEROGLYPHIC INSCRIPTIONS

1. Reg. No. 4106, S7-742 sub, Aug. 25, 1910.  
In the floor debris of the Ahab courtyard. A large two-handled jar (see Pl. 56 g, and Fig. 205), of Egyptian alabaster. In the middle of one side just below the square shoulder an inscription consisting of two cartouches, and one horizontal line of signs:  
“[King of Upper and Lower Egypt] Re-wes-

maat chosen of Amon; [Lord of the Two Lands, Beloved of Amon, son of Bast, Osork] on; hin 81.”

The cartouches give two names and titles of Osorkon II, 874-856 B.C. The horizontal line gives the capacity of the jar.

2. Scarabs, see Part IV, Chapter XI A II.

## D. ARAMAIC INSCRIPTIONS

In S1 cistern 7, in a mass of earth, pottery, bones and other objects (see Fig. 7; Part II, Chapter III, page 62; and Plate 58), eight potsherds were found which proved to bear inscriptions in black ink, like the Israelite ostraca, but presenting a form of alphabet resembling more nearly the Aramaic letters (cf. Lidzbarski, II, Pl. XLV, columns 5-9). These potsherds are not ostraca, but fragments from inscribed jars, which once contained food or drink—dates, grain, wine, or oil. The potsherds were found

with a lot of dressed bones, apparently kitchen debris (see Part IV, Chapter X B). The inscriptions are always written parallel to the turning marks, as is the rule in jar inscriptions. In the three cases in which the attachment of the handle is preserved, the inscription is below or beside the handle. In another case, it is on the edge of the shoulder. These positions are all characteristic of jar inscriptions.

Among the other contents of the rock-cut chamber called S1 cistern 7 there were two black-

glazed Greek lamps and a fragment of red-figured ware. It is therefore not surprising to find on the potsherd No. 9 below, what appears to be a ligature (written twice) of the Greek letters YA written clearly from left to right.

1. Reg. No. 1524, see Pl. 58 a. (The inscription has been made plainer by repeatedly photographing the print, in the well-known manner). Piece,  $24 \times 17$  cm. in size, from the shoulder of a large two-handled jar of hard gray ware burning pink on the surface, see p. 290, No. 1. The inscription is just below the handle. This is not an ostracon, but a jar inscription.

תמר—ץ//////////במ]   
 בר//////////כ//////////

2. Reg. No. 1525, see Pl. 58 b. Fragment of a jar like No. 1. Handle does not show, but the writing runs with the horizontal turning lines.

]-[פ-שנת////////]

Two more illegible lines.

3. Reg. No. 1526, see Pl. 58c. Fragment of a jar as above. Greenish surface. Size, 22 × 14 cm.

בשנת 1111

One or two more illegible lines.

4. Reg. No. 1527, see Pl. 58d. Two potsherds fitting together, from a jar as above. Greenish surface. Inscription under lower attachment of jar. Two illegible lines, but with the number II III clear in the second line.

5. Reg. No. 1528, see Pl. 58e. Fragment from a square-shouldered, two-handled jar (see

Fig. 175, No. 1487) of hard gray ware with drab surface. Size  $12.3 \times 10.5$  cm.

ב  
חמרו א—  
הן  
לתב

6. Reg. No. 1529, see Pl. 58f. Fragment of jar as above, Nos. 1-4, reddish surface. One line, very faint.

7. Reg. No. 1530, see Pl. 58g. Fragment of a smaller jar (two-handled), of hard red ware with drab surface. Inscription to the left of the handle, — the letter  $\Omega$  and part of a second letter.

8. Reg. No. 1531, see Pl. 58h. Potsherd of same ware as above, greenish surface. Two letters: [מזר]

9. Reg. No. 1532, see Pl. 58i. Potsherd of hard gray ware with drab surface (same as above). Inscription written from *left to right*, diagonally across turning marks of vessel. This is therefore not an inscribed jar, but an ostrakon, — a chance scribble like No. 10. The inscription appears to be a ligature, written twice, of the two Greek letters YA.

10. Reg. No. 1533, see Pl. 58j. Potsherd of gray ware with greenish surface. It is marked with lines crossing at right angles dividing the surface into small squares about  $2 \times 2$  cm. in size.

I include here a potsherd of the same ware as the above with what appear to be two Semitic letters.

11. Reg. No. 1630, S2 III 42 sub, Aug. 28, 1909. Fragment from the body of a jar of gray ware with a drab surface. Scratched in the side of the jar before baking, the two letters shown in Pl. 58k. Probably a potter's mark:  
 𐎠𐎢.

## E. GREEK INSCRIPTIONS

I. *Written on pottery*

1. Reg. No. 2091, L. T. 5b, Sept. 16, 1909. Part of an ostrakon, a fragment from the side of a jar. Dirty brown ware, surface pink inside and drab outside. Black inscription. Badly preserved.

L α (? or λ)  
 ]λμ L(?)ν(?)  
 - - - - - Lo  
 - - - τν - Lo  
 - - - Lo

2. Reg. No. 2495, S3-311, Oct. 6, 1909. Jar inscription in black on the side of a two-handled jar of hard gray ware.

]ΛΟΚΑΠΤΑΞΑΠ (end).

“year 29, all at once(?)”

3. Reg. No. 1547, S1 cistern 8, June 17, 1909. Fragment of shoulder of amphora of red paste. Inscription in black to right of lower attachment of handle: CΩΠΑ.

4. Reg. No. 3859, S7 cistern 2, Aug. 11, 1910. Fragment of shoulder of two-handled water jar of gray ware. Inscription in red to left of handle: XAMA (complete).

5. Reg. No. 4506, S8 subt. corr. S, Sept. 15, 1910. Fragment from shoulder of small jug, of red ware, drab surface. Inscription in black to right of handle: ΓΜ (complete).

6. See ostrakon No. 9, under Aramaic Inscriptions, p. 248.

7. See Rhodian Jar Handles, p. 310 ff.

8. Reg. No. 4862, S11 z, Oct. 15, 1910. Faience bowl: ]ΙΑΑΔΕ.

II. *Scratched on pottery*

1. On black-glazed pottery on underside.

- (a) Reg. No. 4587, S8d, Greek Fort, Sept. 20, 1910. Bowl with molded ring-foot, red paste, dull brown glaze. PAΘ - - -

- (b) Reg. No. 3250, S5f, July 2, 1910. Bowl, red paste, dull black glaze. ]Α ΜΕ ι[? See Pl. 74a.

- (c) Dis. No. 1561, L. T. E., July 7, 1910. Bowl base with ring. Red paste, semi-lustrous black glaze. Monogram: ΔΓ or ΔΠ.

- (d) Dis. No. 1561, L. T. E., July 7, 1910. Bowl base with ring. Red paste, dull black glaze. Single letter: Μ.

- (e) Dis. No. 1565, L. T. E., July 9, 1910. Red paste, semi-lustrous black glaze. Letters: ΕΚ.

- (f) Dis. No. 438, L. T. E., July 14, 1910. Molded base of cup. Red paste, lustrous black glaze. Letter: Δ.

- (g) Dis. No. 434, S4-361 sub, July 12, 1910. Bowl base with ring. Red paste, black glaze. Letter: Ζ or Ν.

- (h) Dis. No. 431, S5h W, July 9, 1910. Red paste, semi-lustrous black glaze. Letter: Χ.

2. On red-glazed pottery on underside.

- (a) Reg. No. 4916, S7 dump, Oct. 20, 1910. Molded base.

ΛΑΟΔΙΚΗ.

- (b) Reg. No. 4683, S10b, Sept. 28, 1910. Plate base with ring.

ΗΡΑΚΛΕΑ.

- (c) Reg. No. 4720, S10b, Sept. 29, 1910. Plate base with ring.

ΒΑ[- - -]ΙΑ.

- (d) [Reg. No. 4719, S10b, Sept. 29, 1910. Bowl base with ring. Inscription on side (outside): ΒΑΙ(?) - - - -

- (e) Reg. No. 2431, S3 street sub, Oct. 6, 1909. Yellow paste, red glaze. Bowl base with ring. ΑΥΚ. See Pl. 73k 1.

- (f) Reg. No. 3099, S2 III 68, June 20, 1910. Flat plate. Inscription *inside*: ΟΠ - - -

- (g) Reg. No. 4681, S10b, Sept. 18, 1910. Bowl base with ring. Inscription on inside leveled surface of ring: ΕΚ.

- (h) Reg. No. 4675, S8-882, Sept. 27, 1910. Bowl base with ring base. On side (outside): ΔΠ.

- (i) Reg. No. 4566, S8d, Sept. 19, 1910. Bowl base with ring. ΔΗ.
- (j) Reg. No. 4678, S10d, Sept. 28, 1910. Bowl base with ring. -- ΦΙ.
- (k) Reg. No. 3354, S5b, July 6, 1910. Bowl base with ring. -- ϣ, or Ιϣ --.
- (l) Reg. No. 3528, L. T. E., July 16, 1910. Bowl base with ring. ΖΑ.
- (m) Reg. No. 3143, S5a, June 29, 1910. Bowl, with ring base. ϣ or Ε. See Pl. 74 f.
- (n) Reg. No. 4740, S10b, Oct. 1, 1910. Plate base with ring. ΔΙΓ(?).
- (o) Reg. No. 4686, S10a, Sept. 28, 1910. Bowl base with ring.
- (p) Dis. No. 461, S6g, Aug. 13, 1910. Bottom of bowl. Monogram: ΔΓ.
- (q) Dis. No. 1190, S11x, Oct. 17, 1910. Rim of hollow bowl. Outside: ΔΡ.
- (r) Dis. No. 569, S8-803, Aug. 19, 1910. Bottom of bowl. Monogram: ΛΕ.
- (s) Dis. No. 452, S6e, July 15, 1910. Bowl base with ring. Ε or ΙΕ.
- (t) Dis. No. 453, S6f, July 21, 1910. Bowl base with ring. Α, in a circle.
- (u) Dis. No. 1556, L. T. E. b, July 12, 1910. Bowl base with ring. Δ.
- (v) Dis. No. 451, S10a, Aug. 27, 1910. Molded base. Κ.
- (w) Dis. No. 420, S5h, July 8, 1910. Bowl base with ring. Μ(?).
- (x) Dis. No. 405, S5d, July 5, 1910. Bowl base with ring. Ρ (reversed).
- (y) Dis. No. 396, S4-342 sub, July 30, 1910. Bowl base. Φ.

### III. On Stone and Lead

1. Reg. No. 2046, S2 dump heap of 1908, July 9, 1909. Greater part of a limestone tablet, on left a column in high relief. There was a similar column on the right, and a pediment above, as was the case with No. 2, below. The stone had been used in a wall (?), and the incised inscription is badly worn, see Pl. 59a.

1. ΔΙΦΙΛΙΔΗΞ ΕΡΜ[
2. ΤΩΝΔΕ ΠΡΟΓΟΝΩΝΤ[
3. ΝΙΚΟΔΗΜΟΞ ΝΙΚΟ[

4. ΒΑΣΙΛΕΩΞ ΔΗΜ[ΗΤΡΙΟΥ (name written over an erasure)
5. ΑΝ[ . . . . . ]ΠΡΟΞΑΝ[
6. ΙΕΡ[ . . . . . ]ΝΔΙΟΔΟ[
7. [ . . . . . ]ΧΟΝΤ
8. [ . . . . . ]
9. Α[ . . . . . ]ΝΙΟΞ
10. ΗΓ[ . . . . . ]ΑΝΔΡΟΞ
11. ΟΓΡΑΜΜΑΤΕΥ[Ξ
12. ΝΙΚΙΑΞ ΝΙΚΙΟ[

2. Reg. No. 3205, N. G. T. 6, June 30, 1910. Limestone, see No. 1. Only ends of two lines:

1. . . . . . ΛΑΞ
2. . . . . . ΟΥ

3. Reg. No. 4731, S9 debris in sub. corr. due to agricultural filling, Oct. 1, 1910. Limestone architectural fragment (base). Letters formed by drilling small holes at corners and connecting with incised lines. See Pl. 59b.

-- Φ]ΙΛΟΧΑΡΗΞ ΦΙΛΟΧΑΡΟΥ  
]ΩΝ ΤΟ ΕΝ ΕΡ ΕΤΟΞ

4. Reg. No. 4475, S9 N add., dump, Sept. 12, 1910. Fragment (24 × 16 cm.) from a great limestone jar or basin. Inscribed letters:

]ΔΩ . . . . .  
]ΡΕΑΥΤΟΥ[

5. Reg. No. 3614, S6c, July 25, 1910. Fragment from a mold with reversed letters, see Pl. 68o.

]ΥC  
]ΑΝΟ  
]ΛΟC

6. Reg. No. 3638, S6a W, July 27, 1910. Lead disc, diam. 6.3 cm., thickness 1.1 cm., with suspension hole above, see Pl. 57g.

ΦΑΝ

Front: ΑΙΝΣΙ in a beaded circle.  
ΛΠΗ

Back, blank.

7. Inscribed architrave block in Basilica, see Pl. 59c. Lying on layer of debris on the inner edge of the colonnade of the central court, nearly opposite the door leading to the Forum.

CΤΡΑ]ΤΗΓΟΥΝΤΩΝΑΝΝΙΟΥΡΟ[ΥΦΟΥ  
]ΔΕΡΑΝΤΗΚΟΙ

## F. LATIN INSCRIPTIONS

In addition to the two inscribed altars found in 1908<sup>1</sup> (see Pl. 59 d, e), one Latin inscription was found at the Gateway, and a number of fragments of inscribed marble slabs were found in front of the Temple.

1. Limestone slab, Gateway in upper debris between the N. Tower and the Herodian wall, July 2, 1909, see Pl. 59 f.

VEXILLATIO  
LEG VI FERR

2. Reg. No. 3578, S6 f, July 21, 1910. Fragment of a marble slab inscribed on one side only:

]C I N[  
]V I C T[  
]C A N T I C A M[

3. Reg. No. 3526, S6 a-c, July 15, 1910. Fifteen fragments of a marble slab inscribed on both sides. Eight of these fit together into a larger fragment. The inscription on the back has been erased.

]O I V I R[?  
]V A E M[?

4. Reg. No. 1575, S2 south, July 28, 1909. A fragment of a marble slab inscribed on both sides, neither side erased.

Besides the fragments here enumerated, twenty-six fragments were found in 1908. See copies and description in Part I, page 16, Nos. 22-50; page 19 f.; Vol. II, Plate 90 g.

<sup>1</sup> See article by David G. Lyon in *Harvard Theological Review* for 1909, p. 110 ff.; and above, p. 20, No. 30, p. 21, No. 31.

## CHAPTER II

### COINS AT SAMARIA

There are only three coins which may be previous in date to 300 B.C.—the Athenian silver coin No. 1571 (I 1), the Alexander bronze coin No. 2052 (I 2), and the Ptolemaic bronze coin No. 4874 (uncertain date, II 1). There are sixteen coins of Ptolemy I (possibly more), thirty-one or more of Ptolemy II, six of Ptolemy III, one or more of Ptolemy IV, and one of Ptolemy V. A few of these may be later, but none can be ascribed with certainty to a later date.

The great majority of the Ptolemaic coins belong, as might be expected, to the period of the Ptolemaic domination at Samaria, 300 to 200 B.C.

The Seleucid bronze coins begin with Antiochus III. There is one coin of Antiochus I, a gold drachm (No. 1566); but the value of the metal would account for its unexpected presence. There are twenty coins of Antiochus III, one of Seleucus IV, forty-six of Antiochus IV, four of Demetrius I, ten of Demetrius II (first reign), eleven of Antiochus VII, one of Demetrius II (second reign), twelve of Alexander II Zebina, four of Cleopatra and Antiochus VIII, two of Antiochus VIII, and three of Antiochus IX.

Thus the coins of the Second Century reflect the domination of the Seleucidans, as did those of the Third that of the Ptolemies. Alongside these Seleucidan coins appear twenty coins of Ptolemais-Ake and one of Aradus (No. 2481; 208 B.C.). Specimens of the regal coinage of Syria and Egypt subsequent to Antiochus IX were not found at all.

In the First Century B.C. the coins used are from the Maccabæan and the autonomous city mintages. Ptolemais is represented by four coins, Dora by three, Tripolis by one, Tyre by forty-three, Antioch on the Orontes by fifteen, and Demetrias by two. The Maccabæan coinage is represented by one coin of Alexander Jannæus, seven of an uncertain Alexander, two of Antigonus-Mattathias, and forty-two of the star and anchor type.

From the time of Herod I there are sixteen coins; Herod Archelaus, six; the Roman Procurators, four; Tiberius, two; Herod Agrippa, two; and Nero, seven.

The facts presented are given graphically in the following table:

#### *Ptolemaic*

310-305	B.C.	Ptolemy I (Regent)	1	247-6-221-0	B.C.	Ptolemy III	3 (6)
305-285	B.C.	" I	17	221-0-204-3	B.C.	" IV	1 (4)
285-247/6	B.C.	" II	31 (38)	205-4-180	B.C.	" V	1 (silver)

N. B. These dates are those given by Svoronos (see p. 254, n. 3), and refer to coinage.

<i>City Coins</i>				
About 208 B.C.	Aradus	1	138-129 B.C. Antiochus VII	11
			130-125 B.C. Demetrius II (second)	1
			128-123 B.C. Alexander II Zebina	12
175-126 B.C.	Ptolemais-Ake	20	125-121 B.C. Antiochus VIII & Cleopatra	4
1st Century B.C.	Tyre	43	121- 96 B.C. Antiochus VIII	2
" "	Antioch on Orontes	15	116- 96 B.C. Antiochus IX	3
" "	Dora	3	<i>Maccabæan</i>	
" "	Tripolis	1	105- 78 B.C. Alexander Jannæus	1
" "	Ptolemais-Ake	4	78- 40 B.C. " (uncertain)	7
" "	Demetrias	2	78- 40 B.C. Star-Anchor	42
" "	Unidentified	1	40- 37 B.C. Antigonos	2
<i>Seleucidan</i>			<i>Herodian</i>	
281-261 B.C.	Antiochus I	1(gold)	34 B.C. Herod I	7
			34- 7 B.C. " "	11
			4 B.C.-6 A.D. Herod Archelaus	6 (2)
223-187 B.C.	Antiochus III	20	6- 14 A.D. Procurators	4
187-175 B.C.	Seleucus IV	1	16- 17 A.D. Tiberius	1
175-164 B.C.	Antiochus IV	46	31- 32 A.D. "	1
162-150 B.C.	Demetrius I	4	Herod Agrippa	1
146-138 B.C.	Demetrius II (first)	10	Nero	7

It is to be noted that one silver coin (No. 3652) of Antiochus VII (dated to 131 B.C. and minted at Tyre) was found tied in a rag together with twenty-two Tyrian bronze coins (Nos. 3653-3674) dated from 94 to 74 B.C. This small hoard had been buried in a hole under the floor of room S4-201, in a house of the last Preherodian town (see Pl. 32 c+), and lost probably by some accident to the owner. The coins were massed together by the oxidization of the bronze. The bronze coins were all worn specimens; whence one may conclude that they were placed together some years after date of issue, perhaps about 60 to 50 B.C. At that time the silver coin of 131 B.C. was still current, an interval of over fifty years, probably over seventy. The bronze coins are over half the total number of Tyrian bronze coins found at Sebaste.

The period from 110 to 60 B.C. can hardly be said to be represented among the coins found at Samaria. For it is quite possible that the few city coins with date issue of this time came to the site as coins current in later years. They are all well-worn specimens. This fact appears to support the statement of the total destruction of Samaria in 109 B.C. and its repopulation by Gabinius about 60 B.C.

## CATALOGUE

## A. GREEK COINS

## I. Earlier Coins

- |    |                  |   |   |
|----|------------------|---|---|
| 1. | 5th Century B.C. | Head of Athena, r., wearing crested helmet with three olive leaves, earring, and necklace.<br>AR (base metal), 21 mm. See Head, <sup>1</sup> p. 371 ff.<br>a. Reg. No. 1571, S2 stone-thieves' trench, site of south temple wall, July 24, 1909. Pl. 60, No. 1. | ΑΘΕ downwards. Owl standing r., head facing. Behind, an olive and berry and a crescent. In incuse square. |
| 2. | 336-323 B.C.     | Head of young Heracles in lion skin, r.<br>AE, 18 x 16.5 mm., 5.3 grammes. See Head, p. 226.<br>a. Reg. No. 2052, L. T. 3 a 39, Sept. 9 (a.m.), 1909. Pl. 60, No. 2.  | ΑΛΕΞΑΝΔΡΟΥ. On the r., a club; on the l., bow and quiver.   |

II. Ptolemaic Coins<sup>2</sup>

- |    |                                 |  |   |
|----|---------------------------------|--|---|
| 1. | Ptolemy I.<br>310-305 B.C.      | Head of Aphrodite, r.<br>AE, 15 mm. (normal 17). See Svoronos, <sup>3</sup> No. 79, Pl. VI 26.<br>a. Reg. No. 4874, S11-22 above Israelite wall, Oct. 12, 1910. Pl. 60, No. 3.               | Eagle, with outspread wings, l.   |
| 2. | Ptolemy I.<br>305-285 B.C.      | Head of Alexander, r., with little horns, hair hanging under ear.<br>AE, 17 mm. See Svoronos, No. 163.<br>a. Reg. No. 2486, S3 street, west, Oct. 9 (morning), 1909. Pl. 60, No. 4.          | ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., with outspread wings, on thunderbolt. In left field, X above a helmet. |
| 3. | Ptolemy I.                      | Same.<br>AE, 14 mm. (normal 18). See Svoronos, No. 156 (?).<br>a. Reg. No. 3701, S4 under street, Aug. 1, 1910. Pl. 60, No. 5.   | Same. With a scroll (?) in left field. Inscription illegible.   |
| 4. | Ptolemy I.                      | Same.<br>AE, 17 mm. See Svoronos, No. 157.<br>a. Reg. No. 3393, S5 e in repaired Greek Fort Wall, July 8, 1910. Pl. 60, No. 6.   | Same. With ΔΙ below a scroll (?) in l. field.   |
| 5. | Ptolemy II.<br>279 B.C.         | Same.<br>AE, 17 mm. See Svoronos, No. 638.<br>a. Reg. No. 4751 (15 mm.), S7-755 north, Sept. 14, 1910. Pl. 60, No. 9.  | Same. In l. field, Η above a club.  |
| 6. | Ptolemy II.<br>270 B.C.         | Same.<br>AE, 17 mm. See Svoronos, No. 641.<br>a. Reg. No. 4829, Samarra a, Sept. 9, 1910. Pl. 60, No. 8.   | Same. For l. field, Γ above a club.   |
| 7. | Ptolemy II. (?)<br>284-280 B.C. | Same.<br>AE, 19 x 17 mm. See Svoronos, No. 633 (?).<br>a. Reg. No. 3691, S4-327, July 30, 1910. Pl. 60, No. 7.   | Same. In l. field, obscure marks, perhaps X under a club.   |
| 8. | Ptolemy I.<br>305-285 B.C.      | Head of Alexander the Great in elephant skin, r.<br>AE, 20 mm. (normal 20-22). See Svoronos, No. 220.<br>a. Reg. No. 4743, S9-941 deep near Greek Fort Wall, Sept. 19, 1910. Pl. 60, No. 12. | ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., with outspread wings, on thunderbolt. In l. field, Μ (?).              |

<sup>1</sup>Barclay V. Head, *Historia Nummorum* (second edition). Oxford, 1911.<sup>2</sup>Arranged according to types of obverse. The dates given in

the second column represent the ranges of the coins according to Svoronos.

<sup>3</sup>I. N. Svoronos, *TA NOMISMATA TOT KPATOTZ TON ΠΤΟΛΕΜΑΙΩΝ*. 4 vols. Athens. 1904-1908.



9.	Ptolemy I.	Same. AE, 21 mm. (normal 20-22). See Svoronos, No. 188. a. Reg. No. 3609, S6 e, July 25, 1910. Pl. 60, No. 10. b. Reg. No. 3605, S6 d, July 25, 1910.	Same. In l. field, ΔI (?).
10.	Ptolemy I.	Same. AE, 20 mm. (normal 20-22). See Svoronos, No. 235. a. Reg. No. 3967, S6-626, Aug. 18, 1910. Pl. 60, No. 11.	Same. In l. field, X.
11.	Ptolemy I.	Same. AE, 21 mm. Cf. Nos. 8-10 above. a. Reg. No. 4870, S11-22 (black dirt), Oct. 13, 1910. Pl. 60, No. 13.	Same. L. field struck off flan.
12.	Ptolemy I.	Same. AE, 20 mm. a. Reg. No. 2518, S3-324, Oct. 12, 1909.	Same. Field not read.
13.	Ptolemy II. 285-265 B.C.	Head of Alexander the Great in elephant skin, r. AE, 23 mm. (normal 20), 9.5 grammes. See Svoronos, No. 601. a. Reg. No. 1752, vault cistern 2, Aug. 26, 1909.	ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., with outspread wings, on thunderbolt. In l. field, a shield with Σ above it.
14.	Ptolemy II. 267 B.C.	Same. AE, 23 mm. (normal 24), 9.9 grammes. See Svoronos, No. 439. a. Reg. No. 2673 (centre-marked), S3 g S dirty yellow debris, Oct. 1, 1909. Pl. 60, No. 14.	Same. L. field empty. Between legs, Δ (or A).
15.	Ptolemy II. 266 B.C.	Same. AE, 23 mm. (normal 24). See Svoronos, No. 450. a. Reg. No. 4644, S9-914, Sept. 6, 1910. Pl. 60, No. 15.	Same. L. field empty. E between legs.
16.	Ptolemy II. (?)	Similar. AE, 23 mm. (normal 24). a. Reg. No. 4826, S11-3, Oct. 7, 1910.	Similar. Field not read.
17.		Similar. AE, 25 mm. a. Reg. No. 2480, S3 a west, Oct. 8, 1909.	Similar. Field obscure.
18 <sup>1</sup> .		Similar. AE, 21 mm. Perhaps Svoronos, No. 1236 (?). a. Reg. No. 1580, S2 south middle, July 30, 1909.	Similar. Struck partly off flan below.
18 <sup>2</sup> .	Ptolemy I.	Head of Zeus (Ammon), r. AE, 28 mm. See Svoronos, No. 269. a. Reg. No. 1579, S2 south middle, black dirt, July 20, 1909. Pl. 60, No. 21.	ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., with outspread wings, on thunderbolt. In l. field, A above X.
19.	Ptolemy I.	Same. AE, 27 mm. (normal 28). See Svoronos, Nos. 269 ff. a. Reg. No. 3420, N. G. T. 8, July 8, 1910. Pl. 60, No. 20.	Same. In l. field, A above M.
20.	Ptolemy I.	Same. AE, 27 mm. (normal 28). See Svoronos, No. 286. a. Reg. No. 1573, S2 west end of Greek Fort Wall (-80 cm.), July 27, 1909. Pl. 60, No. 19.	Same. In l. field, A above Σ.
21.	Ptolemy I.	Same. AE, 27 mm. (normal 28). See Svoronos, No. 287. a. Reg. No. 3512, S5-361, July 14, 1910. Pl. 60, No. 18.	Same. In l. field, A above Φ (?).
22.	Ptolemy I.	Same. AE, 28 mm. See Svoronos, No. 288. a. Reg. No. 3626, S6 e, July 26, 1910. Pl. 60, No. 17.	Same. In l. field, A over X.

- |     |                                 |  |   |
|-----|---------------------------------|--|---|
| 23. | Ptolemy I.                      | Same.<br>AE, 28 mm., 163 grammes. See Svoronos, No. 303.<br>a. Reg. No. 2688, S3 street cistern, Oct. 21, 1909.  | Same. In l. field, $\alpha$ over $\lambda$ (?).   |
| 24. | Ptolemy I.                      | Same.<br>AE, 28 mm. See Svoronos, Nos. 269 ff.<br>a. Reg. No. 4650, S9-907 sub, Sept. 9, 1910. Pl. 60, No. 16.   | Same. In l. field A faint, rest worn off.   |
| 25. | Ptolemy II.<br><br>270 B.C.     | Head of Zeus (Ammon), r.<br><br>AE, 20 x 19 mm. (normal 18). See Svoronos, No. 426.<br>a. Reg. No. 3105 (centre-marked), S. G. T. 3, June 26, 1910. Pl. 60, No. 22.  | $\Pi\Theta\Lambda\epsilon\mu\alpha\iota\omicron\Upsilon$ (l.); $\text{BA}\xi\text{I}\Lambda\epsilon\Omega\xi$ (r.). Eagle, l., with outspread wings, on thunderbolt. Between legs A.  |
| 26. |                                 | Head of Zeus (?), r.<br>AE, 19 x 18.5 mm.<br>a. Reg. No. 4871, S11-1 deep south end, Oct. 14, 1910.  | Eagle, l., with open wings. Rest illegible.   |
| 27. | Ptolemy II.<br><br>285-266 B.C. | Head of Zeus (Ammon), r.<br><br>AE, 27.5 mm. (normal 28). See Svoronos, No. 553.<br>a. Reg. No. 4757, S10 b deep, Sept. 29, 1910. Pl. 60, No. 28.  | $\Pi\Theta\Lambda\epsilon\mu\alpha\iota\omicron\Upsilon$ (l.); $\text{BA}\xi\text{I}\Lambda\epsilon\Omega\xi$ (r.). Eagle, l., with outspread wings, on thunderbolt. In left field $\Sigma$ above a shield. Between legs A. |
| 28. | Ptolemy II.<br><br>277 B.C.     | Same.<br>AE, 28 mm. See Svoronos, No. 576.<br>a. Reg. No. 4637 (trident counter-stamp), S9-904, Sept. 7, 1910. Pl. 60, No. 26.<br>b. Reg. No. 2678 (weight, 15.4 grammes), S3-324, Oct. 12, 1909. Pl. 60, No. 27.  | Same. Between the legs I (year 9).  |
| 29. | Ptolemy II.                     | Same.<br>AE, 26 mm. (normal 28). See Svoronos, Nos. 553-602.<br>a. Reg. No. 2707 (trident counter-stamp), S4, room 342, above floor-level, Oct. 25, 1909.  | Same. Date obliterated.   |
| 30. | Ptolemy II.<br><br>285-271 B.C. | Same.<br>AE, 27 mm. (normal 28). See Svoronos, No. 581.<br>a. Reg. No. 4867 (trident counter-stamp), S11-22, black dirt, Oct. 13, 1910. Pl. 60, No. 23.<br>b. Reg. No. 670 (26 mm.), Summit F cistern, Aug. 15, 1908.  | Same. In l. field, $\frac{1}{2}$ above a shield; below, $\alpha$ . Date between legs obliterated.   |
| 31. | Ptolemy II.                     | Same.<br>AE, 28 mm.<br>a. Reg. No. 4718 (28 mm.), S8-881 (-150), Sept. 28, 1910. Pl. 60, No. 25.<br>b. Reg. No. 4810 (27 mm.), S8 d, Sept. 16, 1910.<br>c. Reg. No. 4928 (26 mm.), S11-1 under Roman wall, Oct. 21, 1910.                                    | Similar, but symbols illegible. All have trident counter-stamp.   |
| 32. | Ptolemy II or III.              | Same.<br><br>AE, 27 mm. Cf. Svoronos, Nos. 1058-1060.<br>a. Reg. No. 4711, S8 c on edge next S7, Sept. 19, 1910. Pl. 60, No. 24.   | Similar, but symbols are illegible. Trident counter-stamp on wing and small counter-stamp $\boxtimes$ between feet.   |
| 33. | Ptolemy II or III.              | Same.<br><br>AE, 24 mm.<br>a. Reg. No. 4643, S9-914, Sept. 8, 1910. Pl. 60, No. 29.  | Similar, but symbols are illegible. Trident counter-stamp.  |
| 34. | Ptolemy II.<br><br>271-246 B.C. | Head of Zeus (Ammon), r.<br><br>AE, 30 mm., 20.5 grammes. See Svoronos, No. 707.<br>a. Reg. No. 1777 (centre-mark), vault cistern 2, Aug. 28, 1909. Pl. 60, No. 30.<br>b. Reg. No. 2709 (31 mm., 22.8 grammes, centre-mark), S4 room 341 sub, Oct. 25, 1909. | $\Pi\Theta\Lambda\epsilon\mu\alpha\iota\omicron\Upsilon$ (l.); $\text{BA}\xi\text{I}\Lambda\epsilon\Omega\xi$ (r.). Eagle, l., with closed wings, on thunderbolt. In left field, a club.                                    |
| 35. | Ptolemy II.                     | Same.<br>AE, normal 25 mm., 11-12 grammes. See Svoronos, No. 708.  | Same. All centre-marked.  |

		<p>a. Reg. No. 1974 (24.5 mm., 11 grammes), L. T. b cave 3, Aug. 28, 1909.</p> <p>b. Reg. No. 2149 (25 mm., 12 grammes), S3 a S above Israelite level, Sept. 20, 1909.</p> <p>c. Reg. No. 3315 (24 mm.), bought of a peasant. Pl. 60, No. 33.</p> <p>d. Reg. No. 3826 (24.5 mm.), S6 f W, Aug. 9, 1910.</p> <p>e. Reg. No. 4053 (23 mm.), S8-804, Aug. 22, 1910. Pl. 60, No. 34.</p> <p>f. Reg. No. 2680 (26 mm., 11 grammes), S Lambda street 3 E, Oct. 13, 1909. Pl. 60, No. 35.</p>
36.	Ptolemy II.	<p>Same.   Same. All centre-marked.</p> <p>AE, 20 mm. See Svoronos, No. 709.</p> <p>a. Reg. No. 3732 (19 mm.), S7 c, Aug. 4, 1910.</p> <p>b. Reg. No. 3734 (20 mm.), S7 b, Aug. 4, 1910. Pl. 60, No. 31.</p>
37.	Ptolemy II.	<p>Same.   Same. Centre-marked.</p> <p>AE, 17 mm. (normal 18), 4.9 grammes. See Svoronos, No. 710.</p> <p>a. Reg. No. 2108, L. T. 5-54, Sept. 18, 1909. Pl. 60, No. 32.</p>
38.	Ptolemy II.	<p>Head of Zeus (Ammon), r.   ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., with folded wings, with cornucopia over wing. In left field, ☉.</p> <p>AE, 31 mm. See Svoronos, No. 790.</p> <p>a. Reg. No. 1195, Basilica N trench, July 20, 1909.</p> <p>b. Reg. No. 4636 (32 mm.; monogram obliterated), S9-904, Sept. 7, 1909. Pl. 60, No. 36.</p>
39.	Ptolemy II.	<p>Head of Zeus (Ammon), r.   ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Two eagles, l., with folded wings, on two thunderbolts, cornucopia over shoulder. Centre-marked.</p> <p>AE, 45 mm. See Svoronos, No. 758.</p> <p>a. Reg. No. 3178, S5 a, June 30, 1910. Pl. 60, No. 37.</p>
40.	Ptolemy II.	<p>Same.   Same. With monogram ☉ in l. field. Centre-marked.</p> <p>AE, 42 mm. See Svoronos, No. 788.</p> <p>a. Reg. No. 2051 (41 mm.), L. T. 2 c 20 below floor, Sept. 9, 1909. Pl. 60, No. 40.</p> <p>b. Reg. No. 1599 (42 mm.), S2 III 33 under floor near south wall, Aug. 16, 1909.</p>
	271-246 B.C.	
41.	Ptolemy III.	<p>Head of Zeus (Ammon), r.   ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., on thunderbolt, closed wings, cornucopia over shoulder. Between legs, ✱. Centre-marked.</p> <p>AE, 19 mm. See Svoronos, No. 968.</p> <p>a. Reg. No. 1565, S2 III 44 N below floor (-100), July 20, 1909. Pl. 60, No. 38.</p>
42.	Ptolemy III.	<p>Same.   Same. Cornucopia in left field instead of over shoulder. Between legs, ✱. Centre-marked.</p> <p>AE, 16 mm. See Svoronos, No. 970.</p> <p>a. Reg. No. 4819, S2 III 70 N sub, Oct. 1, 1910. Pl. 60, No. 39.</p>
43.	Ptolemy III.	<p>Head of Zeus (Ammon), r.   ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., on thunderbolt, closed wings, cornucopia over shoulder. In l. field, a club. Between legs, ✱. Centre-marked.</p> <p>AE, 30 mm. See Svoronos, Nos. 1058-1060. (This coin is of the same type, but Svoronos gives only the sizes 35 mm. and 18 mm.)</p> <p>a. Reg. No. 2482, S3 a W, Oct. 9, 1909. Pl. 60, No. 43.</p>
	246-241 B.C.	
44.	Ptolemy IV.	<p>Head of Zeus (Ammon), r.   ΠΤΟΛΕΜΑΙΟΥ (l.); ΒΑΣΙΛΕΥΣ (r.). Eagle, l., on thunderbolt, closed wings. In l. field, a club. Between feet, Δ l. Centre-marked.</p> <p>AE, 35 mm. See Svoronos, No. 1130.</p> <p>a. Reg. No. 3708, S4-357 street Alpha S sub, Aug. 2, 1910. Pl. 60, No. 44.</p> <p>b. Reg. No. 3119 (broken), S2 III 67, June 28, 1910.</p>

45.	Ptolemy I.	Head of Ptolemy I, r.  AE, 13 mm. (small flan, normal 18 mm.). Cf. Svoronos, Nos. 324-326. a. Reg. No. 4820, S8 d S, Sept. 16, 1910. Pl. 60, No. 42.	[ΠΤΟΛΕΜΑΙΟΥ] (above); [B]AΞIAE[ΩΞ] (below). A winged thunderbolt. Above is a trident counter-stamp.
46.	Ptolemy V.  189 B.C.	Head of Ptolemy I, r.  AR, 26 mm., tetradrachm. See Svoronos, No. 1362. a. Reg. No. 3785, S3 old dump (1908), Aug. 6, 1910. Pl. 60, No. 41.	ΠΤΟΛΕΜΑΙΟΥ (l.); BAΞIAEΩΞ (r.). Eagle, l., on thunderbolt, closed wings. In left field, ΛΙΓ (year 16=189 B.C.). In r. field, ΚΙ (Citium).
47.	Ptolemy IV. (?)	Head of Zeus (Ammon), r.  AE, 16 mm., 6.5 grammes. See Svoronos, No. 1252. a. Reg. No. 2683, S3 dump, Oct. 17, 1909.	Inscription blurred and partly off. Eagle, l., with closed wings, on thunderbolt, cornucopia over wing. In left field, a club (?).
48.		Head of Zeus (Ammon), r.  AE, 23 x 21 mm., 7.2 grammes. a. Reg. No. 2694, S4 a in debris next Greek Fort Wall, Oct. 22, 1909.	[ΠΤΟΛΕΜ]ΑΙΟΥ (l.); BAΞIAE[ΩΞ] (r.). Eagle, l. Rest obscure.
49.		Head of Zeus (Ammon), r. AE, 27 mm. a. Reg. No. 1698, S2 under inner west wall of temple, Oct. 8, 1909.	Illegible.
50.	Ptolemy III. (?)	Head of Zeus (Ammon), r.  AE, 36 mm., 37.5 grammes. Perhaps Svoronos, No. 993. a. Reg. No. 2122, L. T. 5-52 sub, Sept. 25, 1909.	ΠΤΟΛΕΜ[ΑΙΟΥ] (l.); BAΞIAEΩΞ (r.). Eagle, l., on thunderbolt.

III. Seleucidan Coins<sup>1</sup>

1.	Antiochus I. 281-261 B.C.	Head of Antiochus I, r.  AV, 18 mm. See Babelon, <sup>2</sup> p. 17, Nos. 110-112, Pl. IV 7, 8, cf. also 9, 10, 12. a. Reg. No. 1566, S2 old dump (1908), July 22, 1909. Pl. 62, No. 82.	BAΞIAEΩΞ (r.); ANTIOXOY (l.). Apollo, l., seated on omphalos with bow in l. and arrow in r. hand. In l. field, ✽.
2.	Antiochus III. 223-187 B.C.	Head of Apollo with features of Antiochus III, r.  AE, 19-23 mm. See Babelon, p. 55, Nos. 417-422, Pl. X 10. a. Reg. No. 3204 (21 mm. slashed), S5 e, June 30, 1910. Pl. 61, No. 46. b. Reg. No. 2547 (19.5 mm.), S3 street cistern, Oct. 17, 1909. c. Reg. No. 3644 (23 mm.), S6 d, July 27, 1910. Pl. 61, No. 47.	BAΞIAEΩΞ (above); ANTIOXOY (below). Elephant walking, r., with mahout. In l. field, a tripod. Two counter-stamps,—an anchor above and a horse's head below.
3.	Same.	Head of Antiochus III with fillet, r.  AE, 25 mm. a. Reg. No. 4003, S7-716, Aug. 20, 1910. Pl. 61, No. 45.	Same. Only one counter-stamp,—a horse's head below.
4.	Antiochus III. (?)	Head of Apollo laureate, r. On l. a monogram: on a, ✽ (?); on c, † (?).  AE, 15 mm. 2.5 grammes, serrated edge. See Babelon, p. 53, Nos. 401-404. a. Reg. No. 1954 (Δ in ex.), L. T. 1 c south edge, Aug. 27, 1909. b. Reg. No. 4880 (H in ex.), S8-803, Aug. 22, 1910. Pl. 61, No. 73. c. Reg. No. 1271 (H in ex.), Basilica central court sub, Aug. 9, 1909.	BAΞIAEΩΞ (r); ANTIOXOY (l.). Apollo, l., seated on omphalos, bow in l., arrow in r. hand. In l. field, a scroll. In ex., a letter.

<sup>1</sup>Arranged according to reigns.<sup>2</sup>Ernest Babelon, *Les Rois de Syrie, d'Arménie, et de Com-**magène*. Paris, 1890. (In *Catalogue des Monnaies Grecques de la Bibliothèque Nationale*.)

- |    |                                |   |  |
|----|--------------------------------|---|--|
| 5. | Antiochus III.<br>223-187 B.C. | Head of Apollo laureate, r. (Most ex-amples worn and faint.)  | BAΣIAEΩΣ (r.); ANTIOXOY (l.). Apollo standing l., leaning on bow in l., with arrow in r. hand.<br><br>AE, 9-13 mm., 1.1-2 grammes, not serrated. See Babelon, p. 54, Nos. 405-414, Pl. X6, 7.<br>a. Reg. No. 1623 (13 mm.), S2 north of Greek Fort Wall, Aug. 24, 1909.<br>b. Reg. No. 1753 (11 mm., 1.5 grammes), vault cistern 2, Aug. 26, 1909.<br><sup>1</sup> c. Reg. No. 1925 (9 mm., 1.3 grammes), L. T. 1 a cave 1, S, Aug. 24, 1909.<br>d. Reg. No. 2018 (11 mm., 2 grammes), L. T. 3 a, Sept. 7, 1909.<br>e. Reg. No. 2030 (12.5 mm., 1.9 grammes), L. T. 4 c, Sept. 8, 1909.<br>f. Reg. No. 2681 (10 mm., 1.1 grammes), S3 street E, Oct. 13, 1909.<br>g. Reg. No. 2682 (10 mm., 1.2 grammes), S3 street E, Oct. 13, 1909.<br>h. Reg. No. 2697 (10 mm., 1.1 grammes), S3 street, Oct. 22, 1909.<br>i. Reg. No. 3700 (12 mm.), S4-336 sub, Aug. 1, 1910. Pl. 61, No. 74.<br>j. Reg. No. 4712 (11 mm.), S8 c on edge next S7, Sept. 19, 1910. Pl. 61, No. 75.<br>k. Reg. No. 4817 (11 mm.), S9-940, Sept. 17, 1910.<br>l. Reg. No. 1563 (11.5 mm.), S2 III 40 above floor, July 19, 1909.<br>m. Reg. No. 3964 (10 x 9 mm.), S7 Atrium sub, Aug. 13, 1910. |
| 6. | Seleucus IV.<br>187-175 B.C.   | Head of Apollo laureate, r. Monogram $\frac{\Lambda}{\Theta}$ behind neck.  | BAΣIAEΩΣ (r.); ΣΕΛΕΥΚΟΥ (l.). Apollo, l., seated on omphalos, with bow in l., arrow in r. hand.<br><br>AE, 13 mm., serrated edge. Not described by Babelon.<br>a. Reg. No. 4815, Samarra's Land S low level, Sept. 16, 1910. Pl. 61, No. 52.   |
| 7. | Antiochus IV.<br>175-164 B.C.  | Head of Antiochus IV, radiate, r. Behind neck, monogram Babelon No. 179 ( $\frac{\Lambda}{\Theta}$ ). In fillet border.           | BAΣIAEΩΣ (r.); ANTIOXOY (l.). Goddess of Fortune, l., seated on throne with Nike in r. hand. At feet, a bird. In circle of dots.<br><br>AE, 14-15 mm., 4-5 grammes, beveled edge, not serrated. See Babelon, p. 72, Nos. 552-555, Pl. XIII 3.<br>a. Reg. No. 1983 (14 mm., 4.8 grammes), L. T. 1 a cave 1, inside N mastaba, Aug. 28, 1909.<br>b. Reg. No. 2643 (14 mm., monogram struck off), Gateway front of Greek Wall, Aug. 4, 1909. Pl. 62, No. 83.<br>c. Reg. No. 3690 (15 mm., rev. double struck), L. T. E., June 30, 1910. Pl. 61, No. 72.   |
| 8. | Antiochus IV.<br>175-164 B.C.  | Small head of Antiochus IV, radiate, r. Behind neck, the monogram Babelon No. 170 ( $\frac{\Lambda}{\Theta}$ ). In fillet border. | BAΣIAEΩΣ (r.); ANTIOXOY (l.). Goddess, standing, facing, veiled and clothed. In r. hand, a long staff. In circle of dots.<br><br>AE, 13-16 mm., 2-3 grammes, serrated edge. See Babelon, p. 74, Nos. 572-574, Pl. XIII 9.<br>a. Reg. No. 2011 (14 mm., 2.7 grammes), L. T. 1 d S, Sept. 6, 1909.<br>b. Reg. No. 2139 (13.5 mm., 2.9 grammes), S3 e (-120 cm.), Sept. 27, 1909.<br>c. Reg. No. 2158 (15 mm., 3.2 grammes), S3 b (E of S), Oct. 4, 1909.<br>d. Reg. No. 2192A (12.5 mm., clipped), L. T. 5-53 a W, Oct. 6, 1909. Pl. 62, No. 84.<br>e. Reg. No. 2197 (14 mm., clipped), S3 b street, Oct. 6, 1909.<br>f. Reg. No. 2614 (15 mm.), Gateway N of Roman Wall, deep, July 9, 1909.<br>g. Reg. No. 3357 (14 mm.), S5 g E, July 7, 1910.<br>h. Reg. No. 3442 (16 mm.), L. T. E. d, July 12, 1910.<br>i. Reg. No. 3745 (14 mm.), S7 c, Aug. 5, 1910.<br>j. Reg. No. 4656 (14 mm.), Samarra's Land b, Sept. 7, 1910.<br>k. Reg. No. 4912 (14 mm.), S11 z W part of NW tower, Oct. 19, 1910. Pl. 61, No. 81.   |
| 9. | Same.                          | Same type as No. 8, but with the monogram blurred, illegible, or struck off flan.   | a. Reg. No. 2807 (14 mm.), S3 cistern, Oct. 12, 1909.<br>b. Reg. No. 2696 (14 mm., 3 grammes), S3 street, Oct. 22, 1909.<br>c. Reg. No. 2670 (15 mm., 2.5 grammes), S3 c, Sept. 27, 1909. (Doubtful.)<br>d. Reg. No. 2693 (14 mm., 3 grammes), S4 f, Oct. 22, 1909.<br>e. Reg. No. 3145 (13 mm.), S5 a, June 29, 1910.<br>f. Reg. No. 3248 (14 mm.), S5 c, July 1, 1910.<br>g. Reg. No. 4191 (15 mm.), S8 b, Sept. 2, 1910.<br>h. Reg. No. 4714 (13 mm.), S8-816, Sept. 21, 1910. Pl. 61, No. 79.<br>i. Reg. No. 4789 (14 mm.), S9-901 S cistern, Oct. 10, 1910.<br>j. Reg. No. 4794 (14 mm.), S11-1 under second floor, Oct. 10, 1910.<br>k. Reg. No. 4827 (14 mm.), Samarra's Land S, Sept. 11, 1910.<br>l. Reg. No. 4828 (14 mm.), S10 b, Sept. 30, 1910.   |

<sup>1</sup>No. 1925 has in left field partly off flan a monogram ending in P (see III, No. 1 supra).

- |   |  |   |
|---|--|---|
| 10. Antiochus IV.<br>175-164 B.C.   | Like No. 8, but with larger head of Antiochus IV, radiate, r. Behind neck, monogram Babelon No. 170 ( $\frac{A}{B}$ ). Fillet border.<br>AE, 13-15 mm., serrated edge. See Babelon, p. 74, Nos. 572-574, Pl. XIII 9.<br>a. Reg. No. 1520 (14 mm.), H. S. 1, June 22, 1909.<br>b. Reg. No. 3830 (15 mm.), S7-357 sub middle, Aug. 10, 1910. Pl. 61, No. 77.<br>c. Reg. No. 4154 (14 mm.), S7-721, Aug. 30, 1909. Pl. 61, No. 78.<br>The following have the monogram off the flan:<br>d. Reg. No. 1169 (14 mm.), Basilica E cut, Forum 19, June 28, 1909.<br>e. Reg. No. 2689 (15 mm., 3.7 grammes), S3 street cistern, Oct. 21, 1909.<br>f. Reg. No. 2699 (13 mm.), S3 street, Oct. 22, 1909.<br>g. Reg. No. 3191 (14 mm.), S5 b, June 30, 1910.<br>h. Reg. No. 4304 (14 mm.), Samarra's Land c 1, Sept. 5, 1910.   | Same as No. 8.  |
| 11. Antiochus IV.<br>175-164 B.C.   | Like No. 10, with larger head of Antiochus IV, radiate, r. Monogram $\frac{A}{B}$ behind neck.<br>AE, 13-15 mm., 2-3 grammes, serrated edge. See Babelon, p. 74, Nos. 572-574.<br>a. Reg. No. 1936 (14 mm., 2.8 grammes), L. T. 1 a-15, Aug. 25, 1909.<br>b. Reg. No. 4818 (14 mm.), S2 III 69 sub E, Oct. 12, 1910. Pl. 61, No. 80.<br>With monogram blurred or struck off flan:<br>c. Reg. No. 1785 (15 mm., 2 grammes), vault cistern 2, Aug. 30, 1909.<br>d. Reg. No. 1861 (14 mm.), L. T. cistern 1, Aug. 16, 1909.<br>e. Reg. No. 1909 (14 mm., 2 grammes), L. T. 1 a cave 1, Aug. 23, 1909.<br>f. Reg. No. 1911 (13 mm., 2.5 grammes), L. T. 1 c E, Aug. 25, 1909.<br>g. Reg. No. 1950A (13.5 mm., 2.4 grammes), L. T. 1 b cave 3, Aug. 27, 1909.   | Like Nos. 8-10, but with a coarse, blurred appearance.  |
| 12. Antiochus IV.<br>175-164 B.C.   | Head of Antiochus IV, r., with fillet. Border of dots.<br>AE, 14-17 mm., beveled edge, not serrated. See Babelon, p. 74, Nos. 577, 578, Pl. XIII 12.<br>a. Reg. No. 2802 (17 mm.), S3 g S (-300 cm.), Sept. 27, 1909.<br>b. Reg. No. 2806 (15 mm.), S3 cistern, Oct. 12, 1909.<br>c. Reg. No. 2808 (14 mm.), S3-321, Oct. 13, 1909.<br>d. Reg. No. 3927 (16 mm.), S4 dump, Aug. 15, 1910. Pl. 61, No. 68.<br>e. Reg. No. 4652 (14 mm.), S9-907 sub, Sept. 9, 1910. Pl. 61, No. 69.   | BA $\Xi$ IAEQ $\Xi$ (r.); ANTIOXOY (l.), in a circle. Palm-tree. Border of dots.  |
| 13. Demetrius I.<br>162-150 B.C.<br><br>158 B.C.<br>152 B.C.<br>151 B.C.  | Head of Demetrius I, r., with fillet. Behind neck a monogram $\frac{A}{B}$ (?). Border of dots.<br>AE, 15 mm., ca. 2 grammes, beveled edge, not serrated. See Babelon, p. 99, No. 779, Pl. XVII 3.<br>a. Reg. No. 4920 (date $\Delta$ NP), S11 dump from S9-1001, Oct. 20, 1910. Pl. 61, No. 63.<br>b. Reg. No. 1924 (date $\Xi$ P), L. T. 1 a cave 1 S, Aug. 24, 1909.<br>c. Reg. No. 2012 (LA $\Xi$ P), L. T. 1 d S, Sept. 6, 1909.  | BA $\Xi$ IAEQ $\Xi$ (r.); $\Delta$ HMHPTIOY (l.), in a circle. Palm-tree, with the date. Border of dots.                    |
| 14. Demetrius I. (?)<br>162-150 B.C.  | Head radiate, r. Behind neck, $\Delta$ Y. Border of dots.<br>AE, 13 mm., beveled edge, not serrated.<br>a. Reg. No. 4657, Samarra's Land c 5, Sept. 6, 1910.   | BA $\Xi$ IAEQ $\Xi$ (r.); $\Delta$ HMHPTIOY (l.), in a circle. Palm-tree. Border of dots.                                   |
| 15. Demetrius II,<br>first reign.<br>146-138 B.C.<br><br>144-3 B.C.<br><br>144-3 B.C.<br>144-3 B.C.<br>144-3 B.C.<br>144-3 B.C. | Youthful head of Demetrius II, r., with fillet. In border of dots.<br>AE, 13-14 mm., about 2 grammes, beveled edge, not serrated. See Babelon, p. 161, No. 1246, Pl. XXII 20.<br>a. Reg. No. 1921 (14 mm., 2.2 grammes), L. T. 1 a cave 1 NW mastaba, Aug. 24, 1909. Pl. 62, No. 85.<br>b. Reg. No. 3675 (14 mm.), S4-201 above floor, July 28, 1910. Pl. 61, No. 64.<br>c. Reg. No. 3981 (14 mm.), S6-626 E along Greek Fort Wall, Aug. 18, 1910. Pl. 61, No. 66.<br>d. Reg. No. 4651 (14 mm.), S9-907 sub, Sept. 9, 1910. Pl. 61, No. 65.<br>e. Reg. No. 4716 (14 mm.), S8 d above Greek Fort Wall, Sept. 20, 1910.<br>f. Reg. No. 4816 (13 mm.), Samarra's Land a, Sept. 6, 1910. Pl. 61, No. 70.<br>g. Reg. No. 1767 (14 mm., 1.5 grammes), vault cistern 2, Aug. 27, 1909.<br>With illegible date and inscription, but same type:<br>h. Reg. No. 3275 (15 mm.), S5 e, July 2, 1910.<br>i. Reg. No. 3569 (17 mm.), S6 f, July 21, 1910. Pl. 61, No. 67.<br>j. Reg. No. 4717 (14 mm.), S10 a, Sept. 20, 1910. Pl. 61, No. 71. | BA $\Xi$ IAEQ $\Xi$ (r.); $\Delta$ HMHPTIOY (l.), in a circle. Palm-tree, with the date H $\Xi$ P (168 A. S. = 144-3 B.C.). |

- |     |  |   |   |
|-----|--|---|---|
| 16. | Antiochus VII<br>Sidetes<br>(Euergetes).<br>138-129 B.C. | Winged bust of Eros, r. Border of dots.   | BAΣIAEΩΣ ANTIOXOY(r.); EYEPΓETOY (l.). Crown of Isis. Below, a crescent and an eight-pointed star. In ex., the date.  |
|     | 133 B.C.   | AE, 18 mm., beveled edge. See Babelon, pp. 137 ff., Nos. 1035-1039, 1078-1084, 1095-1098, 1105-1110, Pl. XXI 9. | a. Reg. No. 1751 (rev. partly off flan to left; date [Θ]OP = 179 A. S. = 133/2 B.C., 18 mm., 5.5 grammes), vault cistern 2, Aug. 26, 1909. Pl. 62, No. 86.                                |
| 17. | Antiochus VII<br>Sidetes<br>(Euergetes).<br>138-129 B.C. | Small head of Antiochus VII (?), with fillet, r. Border of dots.  | BAΣIAEΩΣ ANTIOXOY(r.); EYEPΓETOY (l.). Owl, r., head facing (not on an amphora). In ex., the date IOP (177 A. S.).  |
|     | 135-4 B.C.   | AE, 18 mm., beveled edge. Not described by Babelon.   | a. Reg. No. 1729 (18 mm., 3.1 grammes), vault cistern 2, Aug. 23, 1909. Pl. 62, No. 87.   |
|     | 135-4 B.C.   |   | b. Reg. No. 1784 (18 mm., date off flan), vault cistern 2, Aug. 30, 1909.   |
|     | 135-4 B.C.   |   | c. Reg. No. 2111 (17 mm., 3 grammes), L. T. 5-60, Sept. 21, 1909.   |
| 18. | Antiochus VII<br>Euergetes.                              | Small head of Antiochus VII, with crested helmet, r.  | Same as No. 17, with date IOP in ex., and monogram Ϙ in l. field.   |
|     | 135-4 B.C.   | AE, 16.5 mm., beveled edge.   | a. Reg. No. 3194, S5 b, June 30, 1910. Pl. 61, No. 51.  |
| 19. | Antiochus VII<br>Euergetes.                              | Same as No. 18.   | Same as No. 17, but with date Δ(?)OP behind owl's head. Monogram Ϙ in exergue.  |
|     | 138-7 B.C.   | AE, 16 mm., 2.8 grammes, beveled edge.  | a. Reg. No. 2570, vault cistern 2, Aug. 25, 1909. Pl. 62, No. 88.   |
| 20. | Antiochus VII<br>Euergetes.<br>138-129 B.C.              | Small head of Antiochus VII (? or Apollo), r. Behind neck, obscure monogram. Before face, ↑. Border of dots.    | BAΣIAEΩΣ ANTIOXOY(r.); EYEPΓETOY (l.). Apollo standing l., naked, bow in l., arrow in r. hand. Date (?) in exergue. Obscure monogram in l. field.   |
|     |  | AE, 14 mm., beveled edge.   | a. Reg. No. 1982 (2.8 grammes), L. T. 1 a cave 1 N mastaba, Aug. 28, 1909. Pl. 62, No. 100.   |
|     |  |   | b. Reg. No. 3085, S2 III 68, June 26, 1910. Pl. 61, No. 50.   |
| 21. | Antiochus VII.   | Head of Antiochus VII, r., with fillet. In border of dots.  | BAΣIAEΩΣ ANTIOXOY †IEPΑΣ (above). Galley. Below, the date ΘOP and Ϙζ.   |
|     | 134-133 B.C.   | AE, 22 x 20 mm., oval, 5.7 grammes, Tyrian mint. See Babelon, p. 151, Nos. 1169-1171, Pl. XXII 3.               | a. Reg. No. 2561, S2 III 64 near floor, Sept. 10, 1909. Pl. 62, No. 89.   |
| 22. | Antiochus VII.   | Prow of a galley, l; above, Ϙθ(?).  | BAΣIAEΩΣ(r.); [ANTIOX]OY (l.), in a circle. Caps of the Dioscuri.   |
|     | 138-129 B.C.   | AE, 12 mm., 2.2 grammes, beveled edge, struck at Aradus. See Babelon, p. 151, No. 1168, Pl. XXII 2.             | a. Reg. No. 2487, L. T. 5 S of apsidal structure, Sept. 27, 1909. Pl. 62, No. 90.   |
| 23. | Antiochus VII.   | Head of Antiochus VII, r., with fillet.   | BAΣIAEΩΣ(r.); ANTIOXOY (l.). Eagle, l., with closed wings, on a prow. Over shoulder, a palm. In l. field, a club (with †) and above it, ϘΕ. In r. field, ΑΞ and below it, the date [ΑΠΡ]. |
|     | 131 B.C.   | AP, 22 mm. Tyrian mint. See Babelon, p. 146, No. 1124.  | a. Reg. No. 3652, S4-201, with 22 Tyrian coins (see No. IV 10), July 28, 1910.  |
| 24. | Demetrius II,<br>second reign.<br>130-125 B.C.           | Head of Zeus, r. Border of dots.  | [B]AΣIAEΩΣ [Δ]HMHTPIOY(r.); [ΘEOY] [NΙΚA]TOΠOΣ (l.). Winged Victory, l., with wreath in r., and palm in l. hand. In l. field, Ξ.  |
|     |  | AE, 19 x 17 mm., beveled edge. See Babelon, p. 160, No. 1235.   | a. Reg. No. 4655, Samarra's Land b, Sept. 7, 1910. Pl. 61, No. 53.  |

- |     |  |  |   |
|-----|--|--|---|
| 25. | Alexander II<br>Zebina.<br>128-123 B.C.<br><br>128-127 B.C.      | Winged bust of Eros, r.<br><br>AE, 15 mm., beveled edge. See Babelon, p. 163, No. 1268, Pl. XXIII 2.<br>a. Reg. No. 4749, S8-861, Sept. 13, 1910. Pl. 61, No. 60.  | BAΞIAEΩΞ (r.); AΛEΞANΔPOY (l.). Anchor with date ΔΠΡ on left side. In l. field, IΞI.  |
| 26. | Same.<br><br><br>127-126 B.C.                                    | Head of Alexander II, r., with fillet. Border of dots.<br><br>AE, 20 mm., beveled edge. See Babelon, p. 164, Nos. 1269-1273.<br>a. Reg. No. 4109, S7-712 sub, Aug. 25, 1910. Pl. 61, No. 58.<br>b. Reg. No. 3606 (19 mm.), L. T. E., July 25, 1910. Pl. 61, No. 57.  | BAΞIAEΩΞ (r.); AΛEΞANΔPOY (l.). Dionysus, standing l., with long staff in l., a vase in r. hand. Beneath r. arm, the date ΕΠΡ.                      |
| 27. | Same.  | Head of Alexander II, r., radiate. Border of dots.<br><br>AE, 20-23 mm., 6-8 grammes, beveled edge. See Babelon, p. 169, Nos. 1311-1314, Pl. XXIII 11.<br>a. Reg. No. 1886 (23 mm., sword under Ξ), L. T. 1 a cave 1 in doorway, Aug. 20, 1909.<br>b. Reg. No. 2564 (20 mm., 6.7 grammes), vault cistern 2, Aug. 19, 1909. Pl. 62, No. 92.<br>c. Reg. No. 2000 (20 mm., 8.5 grammes, scroll under Ξ), L. T. 1 b cave 4, Sept. 3, 1909. Pl. 62, No. 94.<br>d. Reg. No. 3360 (20 mm., straight branch under Ξ), S5 d, July 7, 1910. Pl. 61, No. 54.<br>e. Reg. No. 1318 (20 mm., caduceus (?) under Ξ), Basilica room 3, July 10, 1909.<br>f. Reg. No. 3712 (20 mm., caduceus under Ξ), S7 a on top, Aug. 2, 1910. Pl. 61, No. 55.<br>g. Reg. No. 4838 (20 mm., caduceus (?) under Ξ), S11-23 cistern, Oct. 12, 1910. Pl. 61, No. 56.<br>Some of these appear to have the monogram ΠΠ on the obverse behind the neck, but it may be only a fold of the fillet end. | BAΞIAEΩΞ (r.); AΛEΞANΔPOY (l.). Two cornucopias twined and tied with fillet. In l. field, Ξ above a symbol; in r., A.                               |
| 28. | Alexander II<br>Zebina.  | Head of Alexander II, r., radiate.<br><br>AE, 20-22 mm., beveled edge. See Babelon, p. 168, Nos. 1302-1310, Pl. XXIII 10.<br>a. Reg. No. 2567 (22 x 21 mm., 7 grammes, A above a crown on l. and Π on right), vault cistern 2, Aug. 23, 1909. Pl. 62, No. 95.<br>b. Reg. No. 4884 (20 mm., A above a palm on l., Θ on right), S11-Y above Greek Fort Wall, below a floor which is -200 cm., Oct. 17, 1910. Pl. 61, No. 59.   | BAΞIAEΩΞ (r.); AΛEΞANΔPOY (l.). A double cornucopia bound with a fillet. In l. field, A above a symbol; in r. field, a letter.                      |
| 29. | Antiochus VIII and<br>Cleopatra.<br>125-121 B.C.<br><br>121 B.C. | Head of Antiochus VIII, r., radiate.<br><br>AE, 18-20 mm., beveled edge. See Babelon, p. 174, Nos. 1353-4.<br>a. Reg. No. 3225 (18 mm., date A[ΥΡ]), S5 g, July 1, 1910. Pl. 61, No. 62.<br>b. Reg. No. 1927 (20 mm., 7.2 grammes, date blurred), L. T. 1 c slope, Aug. 25, 1909. Pl. 62, No. 96.<br>c. Reg. No. 4760 (20 mm., date blurred), Kaid's Land, Sept. 14, 1910. Pl. 61, No. 61.<br>d. Reg. No. 4821 (18 mm., date blurred), S9 cistern 1 (Plan 7, F 8), Sept. 6, 1910.  | BAΞIAIΞΞHΞ KΛEONATPAΞ (r.); KAI BAΞIAEΩΞ ANTIOXOY (l.). Owl, standing l., head facing, on amphora. In r. field, IE. Date in exergue.                |
| 30. | Antiochus VIII.<br>121-96 B.C.                                   | Head of Antiochus VIII, r., radiate.<br><br>AE, 18-20 mm., beveled edge. See Babelon, pp. 177 ff., Nos. 1368-1375, 1397, 1398, 1401, 1404, 1406, Pl. XXIV 10.<br>a. Reg. No. 3144 (20 mm., date off flan), S5 a, June 29, 1910. Pl. 61, No. 48.<br>b. Reg. No. 3645 (18 mm., very obscure), S5 d, July 27, 1910.<br>All Babelon's examples of this type with IE are dated previously to 110-109 B.C.   | BAΞIAEΩΞ ANTIOXOY (r.); EΠIΦANOYΞ (l.). Eagle, l., with folded wings, on a thunderbolt. Over shoulder, a sceptre. In l. field, IE. Date in exergue. |



- |     |                                   |  |   |
|-----|-----------------------------------|--|---|
| 31. | Antiochus IX.<br>116-95 B.C.      | Head of Antiochus IX, r., with fillet. | ΒΑΣΙΛΕΩΣ   ANTIOXOY (r.); ΦΙΛΟΠΑΤΟ-<br>ΡΟΣ (l.). Winged thunderbolt, with date<br>under l. wing, ΑΞ. In left field, M and a<br>bunch of grapes.<br>AE, 18 mm., normal 5-7 grammes, beveled edge. See Babelon, pp. 189, 195, Nos.<br>1451-5, 1492-7, Pl. XXVI 1.<br>a. Reg. No. 1728 (18 mm., 4.7 grammes), vault cistern 2, Aug. 23, 1909. Pl. 62, No. 98.<br>b. Reg. No. 1940 (16 mm., 3.5 grammes, small flan, broken, doubtful identification),<br>L. T. 1 c, Aug. 26, 1909. |
| 32. | Antiochus IX.<br><br>111-100 B.C. | Winged bust of Eros, r.                | [ΒΑΣΙΛΕΩΣ]   [ANTIOXOY (r.); ΦΙΛΟΠΑ]-<br>ΤΟΡΟΣ (l.). Victory, l. (tip of wing clear).<br>Date in exergue (blurred).<br>AE, 19 mm., 4.5 grammes, beveled edge. See Babelon, pp. 190, 191, Nos. 1459, 1460,<br>1463, Pl. XXVI 4.<br>a. Reg. No. 2695, S4 g, Oct. 22, 1909. Pl. 62, No. 99.  |

## IV. City Coins

- |    |  |  |   |
|----|--|--|---|
| 1. | Ptolemais-Ake.<br>2nd Century B.C.<br><br>Probably 127-110<br>B.C. | Heads of Dioscuri, jugate, r. Border of<br>dots.<br>AE, 16 mm. See B. M. Cat., Phœnicia, p. 128, Nos. 1-7. Pl. XVI 4.<br>a. Reg. No. 1881 (monogram off), L. T. 1 a before cave 1, Aug. 18, 1909.<br>b. Reg. No. 1926 (3.7 grammes, monogram off), L. T. 1 a cave 1, Aug. 24, 1909.<br>c. Reg. No. 1935 (3.3 grammes), L. T. 1 a 15, Aug. 25, 1909.<br>d. Reg. No. 2001 (2.5 grammes, monogram obscure), L. T. 1 b cave 4, Sept. 3, 1909.<br>e. Reg. No. 2672 (2.8 grammes, monogram obscure), S3 b, Sept. 28, 1909.<br>f. Reg. No. 3152 (monogram obscure), S5 b, June 29, 1910.<br>g. Reg. No. 3193 (monogram off flan), S5 b, June 30, 1910. Pl. 62, No. 107.<br>h. Reg. No. 3247, S5 c, July 1, 1910. Pl. 62, No. 108.<br>i. Reg. No. 3384, L. T. E. a, July 8, 1910.<br>j. Reg. No. 3394 (ΔΥ instead of Ε), S5 e, July 8, 1910. Pl. 62, No. 110.<br>k. Reg. No. 4129, S10 d, Aug. 27, 1910. Pl. 62, No. 111.<br>l. Reg. No. 4642 (monogram off flan), Samarra's Land b, Sept. 10, 1910. Pl. 62, No.<br>112.<br>m. Reg. No. 4913 (17 x 15 mm., Ε above Α ?), S11 z deep, Oct. 19, 1910. Pl. 62, No. 113.<br>The following are decayed and obscure:<br>n. Reg. No. 3571 (14 mm., decayed), S6 f, July 21, 1910.<br>o. Reg. No. 2704 (15 mm., 2.1 grammes), S3 between 322 and 323 under wall, Oct. 25,<br>1909.<br>p. Reg. No. 2705 (16 mm., 3.3 grammes), S3 between 322 and 323 under wall, Oct. 25,<br>1909.<br>q. Reg. No. 2655 (16 mm., 2.7 grammes), Gateway dump, Oct. 26, 1909.<br>r. Reg. No. 4744 (16 mm.), S9-940 deep near Greek Fort Wall, Sept. 19, 1910. | ANTIOXEΩN   TΩN (r.); ΕΝΠΤΟΛΕΜΑΙΔΙ<br>(l.). Cornucopia. In l. field Ε.  |
| 2. | Ptolemais-Ake.<br>2d Century B.C.                                  | Heads of Dioscuri, jugate, r.<br>AE, 16 mm. See B. M. Cat., Phœnicia, p. 129, No. 10, Pl. XVI 6.<br>a. Reg. No. 2710 (11 mm., 2 grammes, inscription l. well preserved, flan much too<br>small for both obv. and rev. dies), S4 c W, Oct. 27, 1909. Pl. 62, No. 101.   | [ANTIOXEΩNTΩN   ΕΝΠΤΟΛΕΜΑΙΔΙ]<br>(r.); ΙΕΡΑΣ ΑΞΥΛΟΥ (l.). Cornucopia.   |
| 3. | Ptolemais-Ake.<br><br>110 B.C. (?)                                 | Female head, r.<br>AE, 14 mm., beveled edge. Cf. B. M. Cat., Phœnicia, p. LXXX, Pl. XLII 4 (dated<br>110 B.C.).<br>a. Reg. No. 2455, S3-307 black debris, Oct. 7, 1909.  | ANTIOXEΩN (r.); TΩN   ΕΝΠΤΟΛΕΜΑΙΔΙ<br>(l.). Lyre. In r. field, Ε.   |
| 4. | Ptolemais-Ake.<br>After 49 B.C.<br><br>44-43 B.C.                  | Head of Zeus-Serapis, r. Counter-stamp,<br>eagle l.  | Goddess, l., on rudder with r. hand on<br>tiller. On left arm, cornucopia and branch.<br>On left:                      On right:<br>LE                      ΠΤΟΛΕ<br>ΑΞΥ                      ΜΑΕΩΝ<br>—————                      ΙΕΡΑΣ<br>A<br>AE, 28 x 24 mm., 8 grammes. See B. M. Cat., Phœnicia, p. 129-130.<br>a. Reg. No. 1801, vault cistern 1, Sept. 2, 1909. Pl. 62, No. 103. |

5.	Same.	Head of Isis on head of Serapis, jugate, l., with small crowns on foreheads.	Same as No. 4. On left: LΘ AΞY On right: ΠΤΟΛΕ ΜΑΕΩΝ ΙΕΡΑΞ
	40-39 B.C.	AE, 22-24 mm. a. Reg. No. 1750 (23 mm., 11.5 grammes), vault cistern 2, Aug. 26, 1909. Pl. 62, No. 102. b. Reg. No. 1766 (24 x 22 mm., 10.9 grammes), vault cistern 2, Aug. 27, 1909. Pl. 62, No. 104. c. Reg. No. 4809 (23 x 25 mm.), S7-773 top dirt, Sept. 5, 1910.	
6.	Aradus.	Head of Tyche, with turreted crown, r.	Prow, l. Letters above, ΑΧΘ (faint). Below, the date in Phœnician letters: 1-NNXX (year 51).
	209-208 B.C.	AE, 16 mm. See B. M. Cat., Phœnicia, p. 15, No. 101-2, and also our No. III 22 above. a. Reg. No. 2481, S3-306 black debris, Oct. 9, 1909. Pl. 62, No. 91. b. Reg. No. 3850, S7 cistern 2, Aug. 10, 1910 (identification doubtful). Pl. 53, No. 142.	
7.	Dora. 1st Century B.C.	Head of Tyche, with turreted crown, r.	Tyche, standing l., r. hand on tiller, cornucopia on left arm. In l. field, ΛΑ; in r., ΔΩ.
	64-63 B.C.	AE, 21 mm. See B. M. Cat., Phœnicia, p. 113, No. 1. a. Reg. No. 3297, S4-351, July 4, 1910. Pl. 62, No. 114. b. Reg. No. 1600, S2-27, Aug. 16, 1909. Pl. 62, No. 105. c. Reg. No. 1187, Basilica E cut, Forum 19, July 3, 1909.	
8.	Tripolis. 1st Century B.C.	Head of Tyche, r., with turreted crown and veil. Palm behind neck.	Prow, r., with caps of Dioscuri. On left downwards ΛΚ (?) Θ (?). Below: [Τ]ΠΙ-ΠΤΟΛΙ[ΤΩΝ].
	84-83 B.C.	AE, 15 mm., 3.5 grammes. See B. M. Cat., Phœnicia, p. 203, No. 16. a. Reg. No. 1783, vault cistern 2, Aug. 30, 1909. Pl. 62, No. 106.	
9.	Tyre. 1st Century A.D.	Head of Tyche, r., with turreted crown.	Palm-tree. In l. field: ΔΚΞ IE In r. field: ΠΡ ΠΑΞ
		AE, 15 mm. See B. M. Cat., Phœnicia, p. 259, No. 284. a. Reg. No. 4285, Samarra's Land 1, Sept. 5, 1910. Pl. 63, No. 149.	
10.	Tyre.	Same.	Galley, l. Above: Λ with date * IEPAΞ Below: ΑΥΛ.
	95-94 B.C. 95-94 B.C. 82-81 B.C. 76-75 B.C. 76-75 B.C. 75-74 B.C. 75-74 B.C.	AE, 19-24 mm., oval, dished flan. See B. M. Cat., Phœnicia, p. 255. All much worn. a. Reg. No. 3662 <sup>1</sup> (21 x 22 mm., LBA), S4-201, July 28, 1910. b. Reg. No. 3670 <sup>1</sup> (21 x 22.5 mm., LBA), S4-201, July 28, 1910. c. Reg. No. 3655 <sup>1</sup> (22 x 19 mm., 7 grammes LEM), S4-201, July 28, 1910. d. Reg. No. 4002 (24 x 23 mm., AN), S7-716, Aug. 21, 1910. Pl. 62, No. 115. e. Reg. No. 3654 <sup>1</sup> (21 x 20 mm., AN), S4-201, July 28, 1910. Pl. 62, No. 116. f. Reg. No. 3656 <sup>1</sup> (19 x 18 mm., 7 grammes, LBN), S4-201, July 28, 1910. g. Reg. No. 3657 <sup>1</sup> (22 x 19 mm., LBN), S4-201, July 28, 1910. h. Reg. No. 1553 (20 x 19 mm., LAN?), S2 III 55, July 14, 1909. i. Reg. No. 1561 (21 x 18 mm.), S2 III 40 above floor, July 19, 1909. j. Reg. No. 1598 (24 x 23 mm.), S2 between west walls of Temple, Aug. 16, 1909. k. Reg. No. 1715 (22 x 19 mm., 5.2 grammes), vault cistern 2, Aug. 21, 1909. l. Reg. No. 1802 (24 x 22 mm., 5.9 grammes), vault cistern 1, Sept. 2, 1909. m. Reg. No. 1803 (21 x 20 mm., 5.2 grammes), vault cistern 1, Sept. 2, 1909. n. Reg. No. 2517 (22 x 20 mm.), S3-324, Oct. 12, 1909. o. Reg. No. 2711 (21 x 20 mm., 5.4 grammes, LAN?), S5 corner Fort Wall, Oct. 27, 1909. p. Reg. No. 3120 (19.5 x 19 mm.), S2 III 66, June 28, 1910. Pl. 62, No. 117. q. Reg. No. 3405 (20 x 19 mm.), surface camp-site, July 9, 1910. r. Reg. No. 3418 (22 x 20 mm.), L. T. E. b, July 11, 1910. Pl. 62, No. 118. s. Reg. No. 3553 (21 x 20 mm., ΖΞ(?) = 81 A.D. (?)), S6 e, July 19, 1910. Pl. 62, No. 120. t. Reg. No. 3607 (21 x 19 mm.), S6 a, July 25, 1910.	

<sup>1</sup>For discovery see page 253.

		u. Reg. No. 3623 (21 mm.), S6 g, July 26, 1910.
		v. Reg. No. 3624 (21 x 19.5 mm.), S6 a, July 26, 1910.
		w. Reg. No. 3653 <sup>1</sup> (23 x 20 mm.), S4-201, July 28, 1910. Pl. 62, No. 119.
		x. Reg. No. 3658 <sup>1</sup> (19 x 19 mm.), S4-201, July 28, 1910.
		y. Reg. No. 3659 <sup>1</sup> (20 x 19 mm.), S4-201, July 28, 1910.
		z. Reg. No. 3660 <sup>1</sup> (23 x 22 mm.), S4-201, July 28, 1910.
		aa. Reg. No. 3661 <sup>1</sup> (22.5 x 21.5 mm.), S4-201, July 28, 1910.
		bb. Reg. No. 3663 <sup>1</sup> (21 x 19 mm.), S4-201, July 28, 1910.
		cc. Reg. No. 3664 <sup>1</sup> (22 x 20 mm.), S4-201, July 28, 1910.
		dd. Reg. No. 3665 <sup>1</sup> (22 x 21 mm.), S4-201, July 28, 1910.
		ee. Reg. No. 3666 <sup>1</sup> (22 x 21.5 mm.), S4-201, July 28, 1910.
		ff. Reg. No. 3667 <sup>1</sup> (21 x 20 mm.), S4-201, July 28, 1910.
		gg. Reg. No. 3668 <sup>1</sup> (22 x 21.5 mm.), S4-201, July 28, 1910.
		hh. Reg. No. 3669 <sup>1</sup> (21.5 x 19.5 mm.), S4-201, July 28, 1910.
		ii. Reg. No. 3671 <sup>1</sup> (22 x 21 mm.), S4-201, July 28, 1910.
		jj. Reg. No. 3672 <sup>1</sup> (22.5 x 22 mm.), S4-201, July 28, 1910.
		kk. Reg. No. 3673 <sup>1</sup> (23 x 19 mm.), S4-201, July 28, 1910.
		ll. Reg. No. 3674 <sup>1</sup> (21 x 20 mm.), S4-201, July 28, 1910.
		mm. Reg. No. 3798 (21 x 20 mm.), S6 W, Aug. 8, 1910.
35-34 B.C.		nn. Reg. No. 4143 (19 x 18 mm., date 4B), S10 e, Aug. 30, 1910. Pl. 62, No. 121.
		oo. Reg. No. 2436 (21 x 19 mm.), S3-306 disturbed debris, Oct. 6, 1909.
11.	Uncertain.	Tyche with turreted crown, r. Galley, l. Field obliterated. AE, 19 mm., dished oval flan, sharply cut. a. Reg. No. 4713, S8-816, Sept. 10, 1910.
12.	Antiochia ad Orontem. After 49 B.C.	Head of Zeus, r. Border of dots. ANTIOXEΩN THΞ (r.); MHTPONOAEΩΞ (l.). Zeus, l., on throne, in right hand Nike, in l. a long staff. Symbol in l. field. Letter in exergue. In wreath. AE, 18-23 mm. (flans usually too small). See B. M. Cat., Galatia, Cappadocia and Syria, p. 155, Nos. 32-35. a. Reg. No. 1519 (18 mm., symbol obscure, ex. off), H. S. 1, June 22, 1909. b. Reg. No. 2664 (18 mm., 8.5 grammes, l. crook-staff, ex. off), S3 dump N, Sept. 15, 1909. c. Reg. No. 3024 (23 x 22 mm., symbol obscure), S. G. T. 2, June 24, 1910. d. Reg. No. 3082 (19 x 18 mm., l. ♀ (?), ex. off), S2 III 67, June 26, 1910. e. Reg. No. 3828 (18 mm., l. cornucopia, ex. off), S7-357 sub middle, Aug. 10, 1910. Pl. 62, No. 124. f. Reg. No. 4172 (23 mm., thunderbolt above, l. cornucopia, ex. off), S10 c, Aug. 29, 1910. Pl. 62, No. 125. 37 B.C. ? g. Reg. No. 4647 (18 mm., l. cornucopia, ex. B(?)l), S9-908, Sept. 7, 1910. Pl. 62, No. 126. 41 B.C. ? h. Reg. No. 4648 (20 x 19 mm., l. cornucopia, ex. H <sup>—</sup> ), S7 stair-cistern (No. 2), Sept. 9, 1910. Pl. 62, No. 127. i. Reg. No. 4746 (21 x 20 mm., illegible), S2 III 68 (50 cm. above floor), Sept. 29, 1910. j. Reg. No. 4747 (20 mm., illegible), with i., above. 37 B.C. ? k. Reg. No. 4753 (20 x 19 mm., no wreath, l. cornucopia, ex. I), S8-814 sub, Sept. 14, 1910. Pl. 62, No. 128. 41 B.C. ? l. Reg. No. 4769 (18 mm., l. a palm-branch, ex. H <sup>—</sup> ), S2 III 65 sub, Oct. 6, 1910. Pl. 62, No. 129. m. Reg. No. 4837 (19 mm., l. obscure, ex. off), S2 III 68 sub, Oct. 12, 1910. n. Reg. No. 2706 (22 x 20 mm., 7.2 grammes), S3 between 322-323, Oct. 27, 1909.
13.	Same.	Same. ANTIOXEΩN THΞMHTPON (r.); OAEΩΞ- THΞIEP AΞKAIAΞYAOY (l.). Same as No. 12. Above, a thunderbolt. In l. field t, ex. off. AE, 24 mm. See B. M. Cat., Galatia, Cappadocia and Syria, p. 154, Nos. 26-28. a. Reg. No. 3389, S5 h W, July 8, 1910. Pl. 62, No. 123.
14.	Demetrias. 1st Century B.C.	Tyche with turreted crown, r. Winged Victory, l., in r. hand a wreath. In l. field LKB; in r. ΔH. The whole in a wreath. AE, 22 mm. a. Reg. No. 2565 (6.7 grammes), vault cistern 2, Aug. 20, 1910. b. Reg. No. 3559, S6 c, July 20, 1910.

<sup>1</sup>For discovery see page 253.

15. Female head, r., with fillet. On head star and crescent. Behind neck  $\Gamma\Xi$ . In circle of dots.  
AE, 19 x 18 mm.  
a. Reg. No. 3693, S4-327 upper debris, July 30, 1910. Pl. 62, No. 130.
- V. *Maccabæan and other Jewish Coins*
1. Alexander Jannæus. 105-78 B.C. Anchor.  $BA\Xi IAE\Omega\Xi$  (l.);  $AAE\Xi AN\Delta POY$  (r.), in a circle. Border of dots. AE, 15 mm., beveled. See Madden,<sup>1</sup> p. 90, No. 3.  
a. Reg. No. 4144, S10 e, Aug. 30, 1910. Pl. 63, No. 145.
2. Uncertain. 78-40 B.C. Anchor, in a circle. Outside:  $BA\Xi IAE\Omega\Xi$  (l.);  $AAE\Xi AN\Delta POY$  (r.). AE, 13 mm., strip-flan. See Madden, p. 97, Nos. 2-4.  
a. Reg. No. 2562, vault hard debris under floor, Aug. 16, 1909.  
b. Reg. No. 2663 (12.5 mm., 1.5 grammes), Gateway dump, Sept. 10, 1909. Pl. 63, No. 166.  
c. Reg. No. 1562, S2 III 40 above floor, July 19, 1909.  
d. Reg. No. 1690, S2 III 63, Sept. 7, 1909.  
e. Reg. No. 1691, S2 III 63, Sept. 7, 1909.  
f. Reg. No. 4654 (13 mm.), S9-906 sub, Sept. 6, 1910. Pl. 63, No. 154.  
g. Reg. No. 2485, S3-306, Oct. 9, 1909.
3. Same. Same type of star and anchor coins, but more or less illegible. Some stars with six points, some with eight.  
a. Reg. No. 1497, S1 upper, June 18, 1909.  
b. Reg. No. 1686, S2 cistern 13, Sept. 7, 1909.  
c. Reg. Nos. 1721, 1722, 1725-7, 1737, 1742, 1745, 1754-8, 1768-75, 1778, 1786-9, 1794, all in vault cistern 2, Aug. 21-25, 1909. Reg. Nos. 1790-3, 1806-9, 1812, 2566, vault cistern 1, Aug. 31-Sept. 2, 1909.  
d. Reg. Nos. 3112-15, S2 III 69, June 28, 1910. Pl. 63, Nos. 132-135.  
e. Reg. No. 4839, S2 III 67 sub, Oct. 12, 1910. Pl. 63, No. 163.  
f. Reg. No. 4752, S8 a, Sept. 15, 1910. Pl. 63, No. 158.
4. Antigonus-Mattathias. 40-37 B.C.  $BACIA|EOCAN|TIFON|OY$ . Within a wreath. In our example No. 4164, the obverse bears a hollow impression of the reverse. AE, 18 mm., double beveled edge. See Madden, p. 101, No. 5.  
a. Reg. No. 4164, S10 b, Aug. 31, 1910. Pl. 63, No. 147.  
b. Reg. No. 2674 (18.5 mm., 6.9 grammes), L. T. 5 a, Oct. 5, 1909. Pl. 63, No. 167.
5. Herod I. 34 B.C. Helmet, with cheek pieces. Above, a six-rayed star. On each side, a palm-branch. In border of dots. AE, 23 mm., beveled flan. See Madden, p. 107, No. 2.  
a. Reg. No. 540, Aug. 8, 1908. See page 21 II 2.  
b. Reg. No. 1556, S2 on top of west wall of Temple, July 17, 1909.  
c. Reg. No. 4770, S11-1 surface Roman street, Oct. 7, 1910. Pl. 63, No. 159.  
d. Reg. No. 4791, S9-901 S floor dirt above cistern, Oct. 10, 1910. Pl. 63, No. 160.
6. Herod I. 34 B.C. Macedonian shield. Border of dots. AE, 18 mm., beveled flan. See Madden, p. 109, No. 3.  
a. Reg. No. 3822, S7 c, Aug. 9, 1910. Pl. 63, No. 141.  
b. Reg. No. 4120, S9 a, Aug. 26, 1910. Pl. 63, No. 144.  
c. Reg. No. 4155, S7-721, Aug. 30, 1910. Pl. 63, No. 146.
7. Herod I. Rude tripod with palm on each side. AE, 19 mm., beveled flan. See Madden, p. 111, Nos. 8-11.  
a. Reg. No. 1273, Basilica central court middle sub, Aug. 9, 1909. Pl. 63, No. 168.

<sup>1</sup>F. W. Madden, *Coins of the Jews*, London, 1881.

8.	Herod I. (?)	Similar to No. 7. AE, 14 mm. See Madden, p. 111, No. 9. a. Reg. No. 4276, Samarra c room 2, Sept. 2, 1910. Pl. 63, No. 148.	Similar to No. 7.
9.	Herod I.	Anchor, and around it, HPΩΔ   BACI. Border of dots. AE, 15 mm., strip flan, beveled. See Madden, p. 112, Nos. 13 ff. a. Reg. No. 1301, Basilica central court sub, Aug. 10, 1909. b. Reg. No. 2650 (16 mm., 1.5 grammes), Gateway floor Roman room 3, Aug. 12, 1909. c. Reg. No. 3731, S4 cistern 1, Aug. 4, 1910. Pl. 63, No. 139. d. Reg. No. 4287 (14 mm.), Samarra b room 5, Sept. 5, 1910. Pl. 63, No. 150. e. Reg. No. 4653 (15 x 13 mm.), S7-743, Sept. 10, 1910. Pl. 63, No. 153. f. Reg. No. 4875 (15 x 14 mm.), N. G. T. 4, June 17, 1910. Pl. 63, No. 164. g. Reg. No. 3646 (15 x 14 mm.), S5 d, July 27, 1910. Pl. 63, No. 137. h. Reg. No. 1272 (16 mm.), Basilica central court N sub, Aug. 9, 1909.	Two twined cornucopias tied, with a caduceus between. Border of dots.
10.	Herod I. (?)	Anchor in circle with traces of letters out-side. AE, 13.5 x 12.5 mm. Cf. Madden, p. 113, No. 21 (p. 98, Nos. 11, 12). a. Reg. No. 3083, S2 III 67, June 28, 1910. Pl. 63, No. 131.	HPΩΔOY (above); BACI (below). In a border of dots.
11.	Herod Archelaus. 4 B.C.-6 A.D.	Anchor, and around it, HP Ω Δ OY, in a circle. Border of dots. AE, 14 mm., strip flan, beveled. See Madden, p. 115, No. 1. a. Reg. No. 1295 (12 mm.), Basilica central court, Aug. 10, 1909. b. Reg. No. 4640 (14 mm.), Samarra's Land, Sept. 5, 1910. Pl. 63, No. 151.	Wreath with gem above and ΕΘ inside. AN
12.	Herod Archelaus. 4 B.C.-6 A.D.	Bunch of grapes. Above, HPΩΔOY. Border of dots. AE, 16 mm., strip flan, beveled. See Madden, p. 117, Nos. 8, 9. a. Reg. No. 1499, S1 cistern 9, July 5, 1909. Pl. 63, No. 169. b. Reg. No. 4750, Samarra's Land, Sept. 13, 1910. Pl. 63, No. 157. c. Reg. No. 4812, S9-1001 N, Sept. 15, 1910. Pl. 63, No. 161. d. Reg. No. 2200, S3 between two E walls, Oct. 1, 1909.	Helmet with cheek pieces and a tuft of feathers. In l. field a small caduceus. Below, ΕΘNAPXOY. Border of dots.
13.		Macedonian shield with face in centre. AE, 18 mm. a. Reg. No. 1867, L. T. 1 a E-400, Aug. 17, 1909. Pl. 63, No. 171.	Helmet with cheek pieces and tuft of feathers. Inscription illegible.
14.		Macedonian shield without face. AE, 13 mm. a. Reg. No. 2621, Roadway Trench, Aug. 4, 1909. Pl. 63, No. 170.	Helmet with cheek pieces and tuft. Inscription illegible.
15.	Procurators of Judæa. 6-14 A.D.	Wheat ear. KAICAPOC, around it. Border of dots. AE, 16-17 mm., strip flan. See Madden, pp. 174-176, Nos. 1-5. a. Reg. No. 4877 (17 mm., ΛΑΓ, Coponius, 6-7 A.D.), N. G. T. 1, June 17, 1910. Pl. 63, No. 165. b. Reg. No. 1151 (16 mm., ΛΑΓ, Marcus Ambivius, 9-10 A.D.), Basilica central court, third stratum, June 26, 1909. c. Reg. No. 1300 (17 x 16 mm., LM, Annus Rufus, 13-14 A.D.), Basilica central court sub, Aug. 10, 1909. d. Reg. No. 2660 (17 mm., date obscure), Gateway outside Roman wall, Aug. 5, 1909.	Palm-tree. On l., Λ; on right, a date. Border of dots.
16.	Tiberius. 16-17 A.D.	TIBEPLOY (above). Two crossed cornucopias, bound. Between is a caduceus. In l. field, Λ; in r. field, Γ. AE, 17 mm., strip flan. See Madden, p. 179, No. 4. a. Reg. No. 3680, S6 dump, July 28, 1910. Pl. 63, No. 138.	KAI CAP within a wreath.
17.	Tiberius. 30-32 A.D.	TIBEPLOY (l.); KAICAPOC (r.). Crook-staff. AE, 17 mm. See Madden, p. 182, Nos. 13-15. a. Reg. No. 4814, S8 d S along E side of Fort Wall, Sept. 16, 1910. Pl. 63, No. 162.	Wreath with Λ and date. Border of dots.

- |     |                           |   |   |
|-----|---------------------------|---|---|
| 18. | Herod Agrippa.<br>43 A.D. | Umbrella. ΑΓ ΠΙΤΤΑ (r.); ΒΑCΙΑΕWC (l.).<br>Border of dots.<br>AE, 17 mm. See Madden, p. 131, No. 1.<br>a. Reg. No. 4669, Samarra's Land a S, Sept. 7, 1910. Pl. 63, No. 156.  | Three wheat ears, on one stalk. In l. field,<br>L; r., S. Border of dots. |
| 19. | Nero.<br>58-59 A.D.       | Wheat ear(? Palm-branch?) ΛΕΚΑΙC (l.);<br>AΠOC (r.). Border of dots.<br>AE, 16 mm., strip flan. See Madden, p. 185, below.<br>a. Reg. No. 1689, S2 sub pavement W, Sept. 5, 1909.<br>b. Reg. No. 1863, L. T. 1 a W, Aug. 16, 1909.<br>c. Reg. No. 1908 (17 mm., 2.7 grammes), L. T. 1 b S edge, Aug. 21, 1909.<br>d. Reg. No. 3511, S5-361, July 14, 1910. Pl. 63, No. 136.<br>e. Reg. No. 3984, S6-626 E, Aug. 19, 1910. Pl. 63, No. 143.<br>f. Reg. No. 4641, Samarra b, Sept. 10, 1910. Pl. 63, No. 152.<br>g. Reg. No. 4668, Samarra a S, Sept. 7, 1910. Pl. 63, No. 155. | NΕΡ ΩNO C in a wreath. Border of<br>dots.                                 |

## INDEX OF PRECEDING CATALOGUE OF GREEK COINS

The large numbers are those of the original registration of finds. The Roman numerals refer to the group in the preceding list; the Arabic numerals, to the division under the group. The letter indicates the individual coin, except in V 3 c, where many coins are massed under c, and V 3 d, where four coins are massed under d.

540—V 5 a.	1686—V 3 b.	1867—V 13 a.
670—II 30 b.	1689—V 19 a.	1881—IV 1 a.
1151—V 15 b.	1690—V 2 d.	1886—III 27 a.
1169—III 10 d.	1691—V 2 e.	
1187—IV 7 c.	1698—II 49 a.	1908—V 19 c.
1195—II 38 a.		1909—III 11 e.
1271—III 4 c.	1715—IV 10 k.	1911—III 11 f.
1272—V 9 h.	1721—V 3 c.	1921—III 15 a.
1273—V 7 a.	1722—V 3 c.	1924—III 13 b.
1295—V 11 a.	1725—7—V 3 c.	1925—III 5 c.
1300—V 15 c.	1728—III 31 a.	1926—IV 1 b.
1301—V 9 a.	1729—III 17 a.	1927—III 29 b.
1318—III 27 e.	1737—V 3 c.	1935—IV 1 c.
1497—V 3 a.	1742—V 3 c.	1936—III 11 a.
1499—V 12 a.	1745—V 3 c.	1940—III 31 b.
1519—IV 12 a.	1750—IV 5 a.	1950A—III 11 g.
1520—III 10 a.	1751—III 16 a.	1954—III 4 a.
1553—IV 10 h.	1752—II 13 a.	1974—II 35 a.
1556—V 5 b.	1753—III 5 b.	1982—III 20 a.
1561—IV 10 i.	1754—8—V 3 c.	1983—III 7 a.
1562—V 2 c.	1766—IV 5 b.	
1563—III 5 l.	1767—III 15 g.	2000—III 27 c.
1565—II 41 a.	1768—9—V 3 c.	2001—IV 1 d.
1566—III 1 a.	1770—5—V 3 c.	2011—III 8 a.
1571—I 1 a.	1777—II 34 a.	2012—III 13 c.
1573—II 20 a.	1778—V 3 c.	2018—III 5 d.
1579—II 18 <sup>2</sup> a.	1783—IV 8 a.	2030—III 5 c.
1598—IV 10 j.	1784—III 17 b.	2051—II 40 a.
1599—II 40 b.	1785—III 11 c.	2052—I 2 a.
1600—IV 7 b.	1786—94—V 3 c.	
1623—III 5 a.	1801—IV 4 a.	2108—II 37 a.
	1802—IV 10 l.	2111—III 17 c.
	1803—IV 10 m.	2122—II 50 a.
	1806—9—V 3 c.	2139—III 8 b.
	1812—V 3 c.	2149—II 35 b.
	1861—III 11 d.	2158—III 8 c.
	1863—V 19 b.	2192A—III 8 d.

2200—V 12 d.  
 2436—IV 10 oo.  
 2455—IV 3 a.  
 2480—II 17 a.  
 2481—IV 6 a.  
 2482—II 43 a.  
 2485—V 2 g.  
 2486—II 2 a.  
 2487—III 22 a.

2517—IV 10 n.  
 2518—II 12 a.  
 2547—III 2 b.  
 2561—III 21 a.  
 2564—III 27 b.  
 2565—IV 14 a.  
 2566—V 3 c.  
 2567—III 28 a.  
 2570—III 19 a.

2614—III 8 f.  
 2621—V 14 a.  
 2643—III 7 b.  
 2650—V 9 b.  
 2655—IV 1 q.  
 2660—V 15 d.  
 2663—V 2 b.  
 2664—IV 12 b.  
 2670—III 9 c.  
 2672—IV 1 e.  
 2673—II 14 a.  
 2674—V 4 b.  
 2678—II 28 b.  
 2680—II 35 f.  
 2681—III 5 f.  
 2682—III 5 g.  
 2683—II 47 a.  
 2688—II 23 a.  
 2689—III 10 e.  
 2693—III 9 d.  
 2694—II 48 a.  
 2695—III 32 a.  
 2696—III 9 b.  
 2697—III 5 h.  
 2699—III 10 f.

2704—IV 1 o.  
 2705—IV 1 p.  
 2706—IV 12 n.  
 2707—II 29 a.  
 2709—II 34 b.  
 2710—IV 2 a.  
 2711—IV 10 o.

2802—III 12 a.  
 2806—III 12 b.  
 2807—III 9 a.  
 2808—III 12 c.

3024—IV 12 c.  
 3082—IV 12 d.  
 3083—V 10 a.  
 3085—III 20 b.

3105—II 25 a.  
 3112—15—V 3 d.

3119—II 44 b.  
 3120—IV 10 p.  
 3144—III 30 a.  
 3145—III 9 e.  
 3152—IV 1 f.  
 3178—II 39 a.  
 3191—III 10 g.  
 3193—IV 1 g.  
 3194—III 18 a.

3204—III 2 a.  
 3225—III 29 a.  
 3247—IV 1 h.  
 3248—III 9 f.  
 3275—III 15 h.  
 3297—IV 7 a.

3315—II 35 c.  
 3357—III 8 g.  
 3360—III 27 d.  
 3384—IV 1 i.  
 3389—IV 13 a.  
 3393—II 4 a.  
 3394—IV 1 j.

3405—IV 10 q.  
 3418—IV 10 r.  
 3420—II 19 a.  
 3442—III 8 h.

3511—V 19 d.  
 3512—II 21 a.  
 3553—IV 10 s.  
 3559—IV 14 b.  
 3569—III 15 i.  
 3571—IV 1 n.

3605—II 9 b.  
 3606—III 26 b.  
 3607—IV 10 t.  
 3609—II 9 a.  
 3623—IV 10 u.  
 3624—IV 10 v.  
 3626—II 22 a.  
 3644—III 2 c.  
 3645—III 30 b.  
 3646—V 9 g.

3652—III 23 a.  
 3653—IV 10 w.  
 3654—IV 10 e.  
 3655—IV 10 c.  
 3656—IV 10 f.  
 3657—IV 10 g.  
 3658—IV 10 x.  
 3659—IV 10 y.  
 3660—IV 10 z.  
 3661—IV 10 aa.  
 3662—IV 10 a.  
 3663—IV 10 bb.  
 3664—IV 10 cc.  
 3665—IV 10 dd.  
 3666—IV 10 ee.  
 3667—IV 10 ff.  
 3668—IV 10 gg.  
 3669—IV 10 hh.  
 3670—IV 10 b.

3671—IV 10 ii.  
 3672—IV 10 jj.  
 3673—IV 10 kk.  
 3674—IV 10 ll.  
 3675—III 15 b.  
 3680—V 16 a.  
 3690—III 7 c.  
 3691—II 7 a.  
 3693—IV 15 a.

3700—III 5 i.  
 3701—II 3 a.  
 3708—II 44 a.  
 3712—III 27 f.  
 3731—V 9 c.  
 3732—II 36 a.  
 3734—II 36 b.  
 3745—III 8 i.  
 3785—II 46 a.  
 3798—IV 10 mm.

3822—V 6 a.  
 3826—II 35 d.  
 3828—IV 12 e.  
 3830—III 10 b.  
 3850—IV 6 b.

3927—III 12 d.  
 3964—III 5 m.  
 3967—II 10 a.  
 3981—III 15 c.  
 3984—V 19 e.

4002—IV 10 d.  
 4003—III 3 a.  
 4053—II 35 e.

4109—III 26 a.  
 4120—V 6 b.  
 4129—IV 1 k.  
 4143—IV 10 nn.  
 4144—V 1 a.  
 4154—III 10 c.  
 4155—V 6 c.  
 4164—V 4 a.  
 4172—IV 12 f.  
 4191—III 9 g.

4276—V 8 a.  
 4285—IV 9 a.  
 4287—V 9 d.

4304—III 10 h.

4636—II 38 b.  
 4637—II 28 a.  
 4640—V 11 b.  
 4641—V 19 f.  
 4642—IV 1 l.  
 4643—II 33 a.  
 4644—II 15 a.  
 4647—IV 12 g.  
 4648—IV 12 h.  
 4650—II 24 a.  
 4651—III 15 d.  
 4652—III 12 e.  
 4653—V 9 c.

4654—V 2 f.	4752—V 3 f.	4826—II 16 a.
4655—III 24 a.	4753—IV 12 k.	4827—III 9 k.
4656—III 8 j.	4757—II 27 a.	4828—III 9 l.
4657—III 14 a.	4760—III 29 c.	4829—II 6 a.
4668—V 19 g.	4769—IV 12 l.	4837—IV 12 m.
4669—V 18 a.	4770—V 5 c.	4838—III 27 g.
-----	4789—III 9 i.	4839—V 3 e.
4711—II 32 a.	4791—V 5 d.	4867—II 30 a.
4712—III 5 j.	4794—III 9 j.	4870—II 11 a.
4713—IV 11 a.	-----	4871—II 26 a.
4714—III 9 h.	4809—IV 5 c.	4874—II 1 a.
4716—III 15 e.	4810—II 31 b.	4875—V 9 f.
4717—III 15 j.	4812—V 12 c.	4877—V 15 a.
4718—II 31 a.	4814—V 17 a.	4880—III 4 b.
4743—II 8 a.	4815—III 6 a.	4884—III 28 b.
4744—IV 1 r.	4816—III 15 f.	-----
4746—IV 12 i.	4817—III 5 k.	4912—III 8 k.
4747—IV 12 j.	4818—III 11 b.	4913—IV 1 m.
4749—III 25 a.	4819—II 42 a.	4920—III 13 a.
4750—V 12 b.	4820—II 45 a.	4928—II 31 c.
4751—II 5 a.	4821—III 29 d.	

## B. ROMAN COINS

The Roman Coins found at Sebaste numbered several hundred, but owing to their small importance for the present purpose, space is not available for a complete list. The coins found in the greatest abundance are those from the Third and Fourth Centuries A.D. The chief sources from which they came were the Basilica (2d stratum, floor stratum, and cistern 1), the Roadway Trench (agricultural debris), Samarra's Land (room 5 sub), and Kaid's Land. As the importance of the Roman coins found elsewhere depends, from our present standpoint, on the provenance, the following short list is arranged according to the places in which the coins were found.

1. L. T. 5 d room 25.
  - a. Reg. No. 1939, Aug. 26, 1909. Copper. Diam., 20 mm.; weight, 9.7 grammes. Caracalla, 211-217 A.D.  
Obv. Head of Emperor, r. IMPANTONINVS[S].  
Rev. Illegible.
  - b. Reg. No. 1953, Aug. 27, 1909. Copper. Diam., 15 mm.; w., 1.7 gms. Constans I, 337-350 A.D.  
Obv. Head, r. CONSTANS-MAXPF [AVG].  
Rev. Two soldiers with sigillum. GLORIA [EXERC] ITVS In ex., SMALE.
2. L. T. 5 d room 24, in niche in west wall, near floor of latest occupation.
  - a. Reg. No. 2053, Sept. 9, 1909. Copper. Diam., 29 mm.; w., 23.8 gms. Caracalla (?).  
Obv. Head, r.  
Rev. Eagle with outspread wings holding wreath in beak. In the wreath, female head, r., with turreted crown.
  - b. Reg. No. 2054, Sept. 9, 1909. Copper. Diam., 22 mm.; w., 7.2 gms.  
Obv. Youthful head, r.  
Rev. Temple, with seated figure, l. In gable-end, a star and the letters T.
3. L. T. 4 d room 23.
  - a. Reg. No. 1986, Aug. 28, 1909. Copper. Diam., 20 mm.; w., 3.3 gms. Valerianus, 253-261 A.D.  
Obv. Head, radiate, r. IMPCPLICVALERIANVS PFAVG.  
Rev. Armed male figure facing draped female. PIETAS AVGC.
4. L. T. 1 a W about 100 cm. below surface.
  - a. Reg. No. 2649, Aug. 12, 1909. Copper. Diam., 30 mm.; w., 20 gms. Severus Alexander, 222-235 A.D.  
Obv. Head, r. IMPCAESMAVRSEVALEXANDER AVG.  
Rev. Naked figure running l., . . . AVG . . . In l. field, S; in r. field, C.
5. H. S. 4 (=L. T. 5 d), agricultural debris.
  - a. Reg. No. 1823, July 2, 1909. Copper. Diam., 20 mm. Geta (?), 211-212 A.D.  
Obv. Youthful head, r.  
Rev. Figure, l., holding staff (?) in r. hand. COL L S SEBASTE.
6. L. T. E.
  - a. Reg. No. 3496, July 14, 1910. Copper. Diam., 19 mm. Julia Domna, 193-217 A.D.  
Obv. Head, r. IVLIA DOMNA . . .  
Rev. Figure, l., staff (?) in r. hand. . . . ANNOB . . .



7. S5 f E, upper debris.
  - a. Reg. No. 3300, July 4, 1910. Copper. Diam., 19 mm. Constans, 337-350 A.D.  
Obv. Head, l. DN CONSTA-NS PFAVG.  
Rev. Soldier, r.; respicient, dragging captive with right hand.
8. S5 h, upper debris.
  - a. Reg. No. 3290, July 2, 1910. Copper. Diam., 15 mm. Constantius II (?), 337-361 A.D.  
Obv. Head, r. . . . CONSTANTIVS . . .  
Rev. Standing figure, l.
9. S5 f E, upper debris.
  - a. Reg. No. 3364, July 7, 1910. Copper. Diam., 12 mm.; type of Constans or later.  
Obv. Head, r.  
Rev. Winged Victory striding l., holding wreath in r. hand.
10. S6 a, upper debris.
  - a. Reg. No. 3601, July 23, 1910. Copper. Diam., 23 mm. Caracalla (?).  
Obv. Bearded head, r.  
Rev. Figure, obscure.
11. S6 h, upper debris.
  - a. Reg. No. 3620, July 26, 1910. Copper. Diam., 21 mm. Obscure, but certainly Roman.
12. S6 f E.
  - a. Reg. No. 3647, July 27, 1910. Copper. Diam., 25 mm. Trajan, 248-251 A.D.  
Obv. Head, r. . . . TPAIANOCCEB . . .  
Rev. Bearded head, r. In r. field,  $\omega$ ; rest illegible.
13. S8 a.
  - a. Reg. No. 3716, Aug. 3, 1910. Copper. Diam., 13 mm. Constantius (?)  
Obv. Head, r. . . . VSPFAVG.  
Rev. Soldier trampling enemy. In ex., ALBI.
  - b. Reg. No. 4748, Sept. 13, 1910. Copper. Diam., 24 mm. Commodus, 177-192 A.D.  
Obv. Bearded head, r. IMPC M-AVR-COMM.  
Rev. Goddess, standing, head turned r. CEBACTHNΩN. In ex., CYP. In l. field, LC; in right, IE (190-215 A.D.).
14. S9, subt. corr., middle, floor dirt.
  - a. Reg. No. 4793, Oct. 10, 1910. Copper. Diam., 20 x 18 mm.  
Obv. Head, r.  
Rev. Female head with turreted crown, r. . . . TPAI (?) . . . — . EPM . . .
15. S9, subt. corr., south, floor.
  - a. Reg. No. 4758, Oct. 8, 1910. Copper. Diam., 16 mm. Constantinus I, 307-337 A.D.  
Obv. Head, r. CONSTANTINVS-MAXAVG.  
Rev. Two soldiers with sigillum. GLOR-IAEXERCITVS. In ex., SMALE(?)
16. S10, surface.
  - a. Reg. No. 4073, Aug. 23, 1910. Copper. Diam., 22 x 20 mm. Geta, 211-212 A.D.  
Obv. Youthful head, r. LSGAT-ECAES (sic!).  
Rev. Standing figure, head r., r. hand over altar, cornucopia on l. arm. COLLS-SEBASTE.
17. S10 c, upper debris.
  - a. Reg. No. 4110, Aug. 25, 1910. Copper. Diam., 27 mm. Elagabalus, 218-222 A.D.  
Obv. Head, r. . . . AN-TONINVS AVG.  
Rev. Olive-tree between two bætys. In ex., dog r., smelling a shell.
  - b. Reg. No. 4176, Sept. 1, 1910. Copper. Diam., 23 mm. Corroded, but apparently duplicate of 13 b (above). Commodus (?).
18. S10 d, upper debris.
  - a. Reg. No. 4755, Sept. 27, 1910. Copper. Diam., 29 x 27 mm. Valerianus (?), 258-261 A.D.  
Obv. Head, r. . . . ANVSAVG.  
Rev. Olive-tree between two bætys. COLTYPO METPO. In ex., dog r., smelling shell.
  - b. Reg. No. 4756, Sept. 27, 1910. Copper; 16 mm.  
Obv. Helmeted head, r. VRBS-ROMA.  
Rev. Wolf suckling Romulus and Remus. Above, two stars between S and R. In ex., SMALA.
19. Gateway, upper debris.
  - a. Reg. No. 2613, July 6, 1909. Copper. Diam., 20 mm.; w., 3.5 gms. Aurelianus and Vabalathus, 270-271 A.D.  
Obv. Head, r. IMP--AVRELIANVS AVG.  
Rev. Head, r. VABALATHVS VGAIN-I(?)O(?)R(?)
20. Gateway, house room 3, in floor.
  - a. Reg. No. 2647, Aug. 12, 1909. Copper. Diam., 20 mm. Salonina, 253-268 A.D.  
Obv. Head, female, r. DNSALONINAAVG.  
Rev. Female figure, standing, holding serpent in r. hand, cup in l. SALVS AVG.
21. Gateway, house room 1, in floor.
  - a. Reg. No. 2648, Aug. 12, 1909. Copper. Diam., 18 mm. Constantius II, 337-361 A.D.  
Obv. Head, r. . . . CONSTA] NTIVSPFAVG.  
Rev. Soldier trampling and spearing enemy, l. REL TEMP[REPARA]TIO.
  - b. Reg. No. 2654, Aug. 12, 1909. Copper. Diam., 18 mm., 2.7 grammes. Constantius II, Caesar, 323-337 A.D.  
Obv. Head, l. FLIVLCONSTANTIVS-NOBC.  
Rev. Façade of building, star above. PROVIDENTIAE CAESS. In ex., SMNE (?).

22. Gateway, above floor of Street of Columns.
- a. Reg. No. 2646, Aug. 12, 1909. Copper. Diam., 20 mm. Constantius I, 305-306 A.D.  
Obv. Head, r. FLVALCONSTANTIVS-NOBCAES.  
Rev. Two standing figures, with joined hands, holding Victory. Between, K B. Around, CONCORDIA MILITVM.
- b. Reg. No. 2659, Aug. 17, 1909. Copper. Diam., 19.5 x 17 mm.; w., 3.4 gms. Constantius II.  
Obv. Youthful head, r. DNFLIVL[CONSTANT]IVS NOBCAES.  
Rev. Soldier trampling and spearing enemy. REL TEMP REPARATIO. In ex., . . . Θ.
23. S. G. T. 4, agricultural debris.
- a. Reg. No. 3328, June 21, 1910. Copper. Diam., 11 mm.; type, Constans I or later. Blurred.
24. N. G. T. 1, upper debris.
- a. Reg. No. 4876, June 16, 1910. Copper. Diam., 13 mm. Valens (?), 364-378 A.D.  
Obv. Head, r. DN . . . NSPFAVG.  
Rev. Wreath, with VOT[X]MVL[XX]. In ex., SMA (?).
- b. Reg. No. 4878, June 17, 1910. Copper. Diam., 14 mm.  
Obv. Head, r. . . . INVS PFAVG.  
Rev. Winged Victory left. In ex., ALBΓ.
25. N. G. T. 5, upper debris.
- a. Reg. No. 3327, June 22, 1910. Copper. Diam., 22 mm. Aurelian, 270-275 A.D.  
Obv. Head, r. IMPCAVRELIANVSAVG.  
Rev. Standing figure, rayed crown, resplendent; r. hand raised, l. holding round object; captive on ground l., star in l. field. SOLIINVICTO. In ex., KA.
26. N. G. T. 10, upper debris.
- a. Reg. No. 3001, June 23, 1910. Copper. Diam., 14 mm.; type of Constans or later.

## C. BYZANTINE COINS

Byzantine coins<sup>1</sup> were unexpectedly rare even at the Basilica. Eight only were found by the expedition. Two others, bought of peasants, were said to have been found in the fields.

1. Basilica, 2d stratum.
- a. Reg. No. 1122, June 20, 1909. Copper. Diam., 31 mm. Justinian I (see Wroth, No. 30).  
Obv. Head, r. DNIVSTINI-ANVSPPAVG.  
Rev. M; on r., cross; below, B; in ex., CON. Rest obscure.
2. Basilica, stone-thieves' trench, inner E wall.
- a. Reg. No. 1311, June 27, 1909. Copper. Diam., 30 mm. Justinian I (see Wroth, No. 267).  
Obv. Head, r. DNIVSTINIANUS PPAVG.  
Rev. M; on left, star; on right, cross; above, cross; below, A. In ex., [Θ]ΥΠΛXS.
- b. Reg. No. 1317, June 27, 1909. Copper. Diam., 30 mm. Justinian I (see Wroth, No. 28).  
Obv. Head, r. DNIVSTI . . . NVSPPAVG.  
Rev. M; on left, star; on right, cross; above, cross; below, A. In ex., CON.
3. Basilica, S Trench, surface debris.
- a. Reg. No. 1267. Copper. Diam., 23 x 20 mm. Justin II (see Wroth, No. 109).  
Obv. Two figures, facing, on thrones. . . . TI-NVS . . . .  
Rev. K; on l., ANNO (vertical); on r., Ε (?); above, obscure; in ex., TΕS.
4. Surface of Summit, SW quarter.
- a. Reg. No. 3301, July 4, 1910. Copper. Diam., 32 mm. Justinian I (see Wroth, No. 39 ff.).  
Obv. Head, full face. DNIVSTINI-ANVS . . . .  
Rev. M; on l., ANNO (vertical); in ex., CON; rest obscure.
5. S6 f, upper debris.
- a. Reg. No. 3827, Aug. 9, 1910. Copper. Diam., 10.5 mm. Obscure, but a cross clear on one side.
6. S. G. T. 1, top debris.
- a. Reg. No. 4879, June 18, 1910. Copper. Diam., 22 x 14 mm.  
Obv. Figure on throne, facing.  
Rev. M; rest obscure.
7. N. G. T. 11, top debris.
- a. Reg. No. 3065, June 25, 1910. Copper. Diam., 22 mm. Justinian I (see Wroth, No. 160).  
Obv. Obscure.  
Rev. K on left; ANNO (vertical) on r. XXX  
q|| below TΕS.

<sup>1</sup>That is, coins from 491 A.D. onwards, as explained by Wroth, *Imperial Byzantine Coins in the British Museum*, p. xi.

## D. ARABIC COINS

Six Arabic coins were found, almost all, I think, of the 12th and 13th Centuries A.D. I have not had time to identify these exactly, nor did space permit a photographic reproduction.

- |   |  |
|---|--|
| 1. Basilica, E cut W, in floor of threshing-floor.          | a. Reg. No. 1263, July 27, 1909. Copper. Diam., 21 mm. Malik-el-Kamil. |
| a. Reg. No. 1181, July 2, 1909. Copper. Diam., 20 mm.       |  |
| 2. Basilica, stone-thieves' trench, inner E wall.           | 4. Basilica, S cut, first stratum.                                     |
| a. Reg. No. 1312, June 27, 1909. Copper. Diam., 28 x 20 mm. | a. Reg. No. 1268, Aug. 6, 1909. Silver. Diam., 14 mm.                  |
| b. Reg. No. 1313, June 27, 1909. Copper. Diam., 16 mm.      | 5. S. G. T. 4.   |
| 3. Basilica, N, upper debris.                               | a. Reg. No. 3125, June 28, 1910. Copper. Diam., 20 mm.                 |

## CHAPTER III

### POTTERY

The occupation of the hill of Samaria begins about 900 B.C. The periods which at present have the greatest archæological interest are the Israelite, the Babylonio-Grecian, the Hellenistic, and the Herodian, an extent of about nine centuries. The objects most in use were naturally the vessels employed in every-day life for cooking, for eating, and for storing food, drink, condiments, perfumes, and cosmetics; and these, being usually of nearly indestructible pottery, form the most abundant remains of all periods. As part of the most necessary outfit of man, and in the main entirely utilitarian, pottery changes quickly with the invention of new technical methods or with the importation of better and cheaper wares.<sup>1</sup> Technique and material must then form the basis of the chronological arrangement. For the purpose of comparison the vessels of each period must be classified according to function and form. In ascribing vessels found in one country to the workshops of another, the vessels so ascribed must be identical in technique, material, and form with vessels known as products of the second country.

In dealing with the pottery found at Samaria the pieces were assigned to the different periods, chiefly on the basis of association with dated objects. The point of departure for the Israelite pottery was given by the Israelite ostraca and the abundant potsherds found with them in the floor debris of the Ahab courtyard. To these were added the potsherds found in the undisturbed debris under the floor, and a mass of potsherds found in disturbed yellow debris which presented the same material, fabric, and form.

The Greek wares of black-figured, red-figured, and white-ground fabrics gave the clue to the pottery of the Babylonio-Grecian period. The group of potsherds in S1 cistern 7 were assigned to this period on the basis of the Aramaic ostraca and the Greek potsherds found with them, and forms the most important series of common potsherds belonging to the period.

The most difficult period to deal with in detail was the Hellenistic. The buildings of this period had been almost entirely destroyed, and it was practically impossible for us to subdivide the pottery of the period on the basis of provenance. Certain cisterns, however, presented valuable evidence. All the pottery in S3 street cistern seemed to be previous to about 150 B.C. All the pottery in vault cistern 2, S7 cistern 1, and S2 cistern under Seleucidan street, was previous in date to 40 B.C. Certain disturbed strata, again, such as S3 north of street, S10 lower stratum north of Greek Fort Wall, and S. G. T. 4-7

<sup>1</sup>The most striking point in the whole history of pottery at Samaria was the complete revolution wrought by the importation of the fine Greek wares.

lower strata seemed to contain objects of the Fourth and Fifth Centuries only. In these cases coins and Greek potsherds were the means of dating the deposits.

For the Roman period, it was necessary to depend on a comparison with known types of sigillata and other wares and on association in debris with Roman coins.

The pottery found at Samaria may be conveniently divided into three functional groups, as follows: the ordinary pottery, including the store-vessels, for grain, water, milk, honey, oil and wine, the cooking vessels, and the common eating and drinking vessels; the finer fabrics, including the drinking vessels, the fine table vessels, the ointment and scent vases; and the decorated pottery, serving the same purposes as the finer fabrics.

#### A. ISRAELITE PERIOD, 900-700 B.C.

- I. Ordinary wheel-made pottery of brown ware burning red when well baked, and of gray ware burning drab or pink when well baked. Bowls and jugs usually bear a thick red hæmatite wash.
- II. Finer pottery. Of the brown-red ware, with pebble-burnished, red hæmatite wash.
- III. Decorated pottery. Vessels of the above types decorated with colored bands or with incised pattern. Also very fine, thin, red wares, with black bands and concentric circles. Cream-slip wares with geometrical pattern.<sup>1</sup>

#### B. BABYLONIO-GRECIAN PERIOD, 700-300 B.C.

- I. Ordinary pottery. Wheel-made vessels of hard drab and red wares. Red hæmatite wash sometimes on small vessels of red ware.
- II. Finer pottery. Red or black, pebble-burnished, coarse wares. Small vessels of black-glazed, fine, red paste of Greek origin. [Glass vessels.]
- III. Decorated pottery. Greek black-figured, red-figured, and white-ground wares.

#### C. HELLENISTIC PERIOD, 300-50 B.C.

- I. Ordinary pottery. Water jars and cooking pots continue the forms of the preceding period, but of a thinner, harder ware. The jugs, pitchers, and small vases, of a fine red or drab ware, show a number of entirely new forms. Rhodian wine jars are found in abundance.
- II. Better pottery. 1. In the earlier part of the period wheel-turned cups, bowls and plates of fine red or gray paste, dull glazed, burned black, brown or red (sometimes mottled). 2. Later, similarly turned forms of red or yellow paste, with fine dull red glaze. [3. Glass vessels.]
- III. Decorated pottery.
  1. Vases of fine red ware of the same forms as those of the common pottery, with impressed patterns (usually rolled) or with painted red bands.
  2. Vessels of fabric II with impressed and rolled patterns.
  3. Vessels of both the dull black-glazed and dull red-glazed fabrics, painted with vine and spot decorations in white or yellow.
  4. Molded bowls (Megarian) of fine, reddish-brown paste, with pattern (acanthus leaves, bucrania, figures, etc.) in relief. Glaze usually rather dull-red, brown or black (sometimes mottled).

<sup>1</sup>These appear to me to present resemblances to certain Greek and Cypriote types of pottery, but I lack the material necessary to make a comparison. [See note 1, page 55. Ed.]

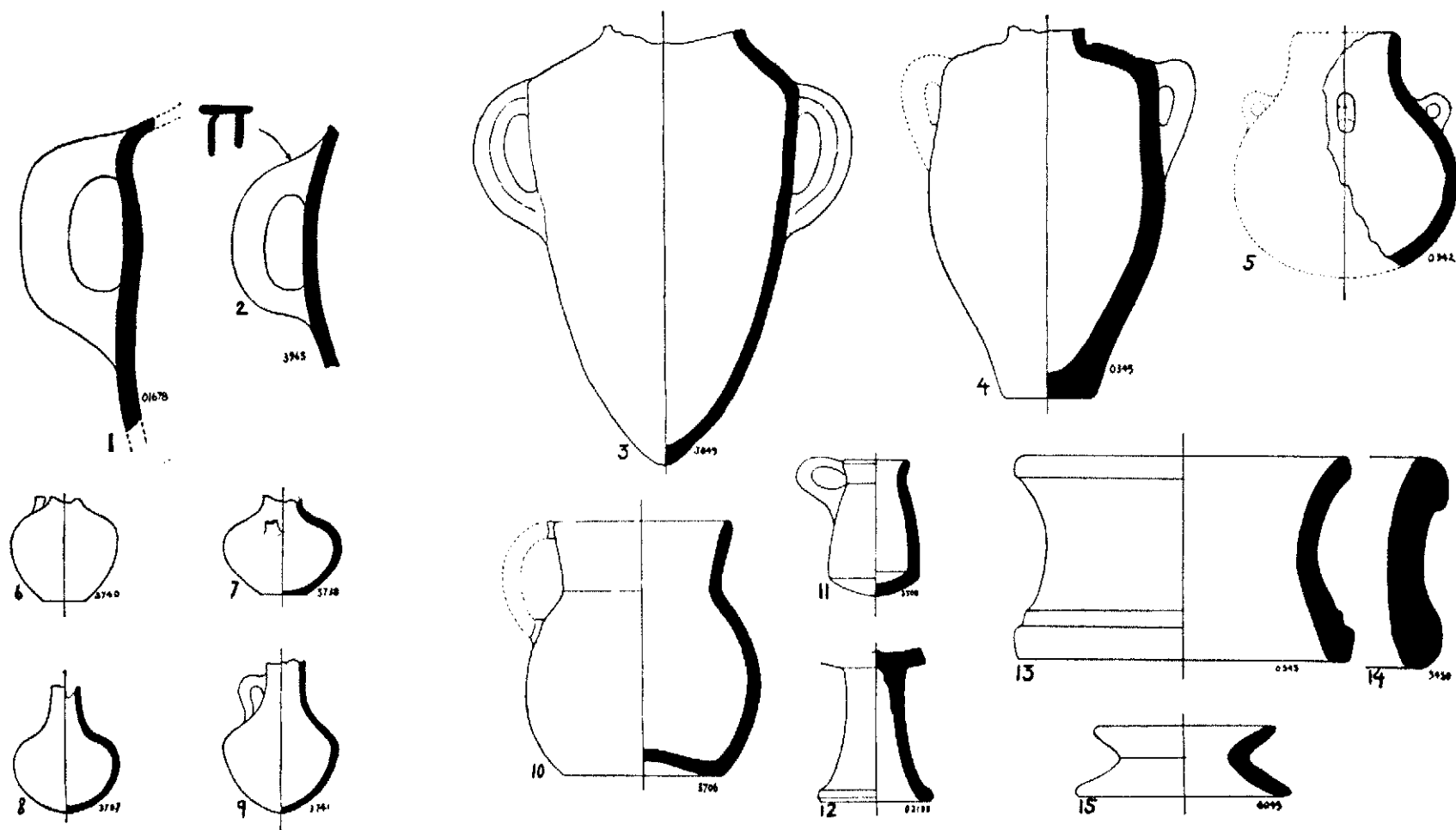
## D. ROMAN PERIOD, 50 B.C.-400 A.D.

- I. Ordinary pottery. Jars and cooking pots similar in form to the Hellenistic vessels but of thin, hard, red ware, fine-ribbed in turning.
- II. Finer vessels. Of true Arretine ware. [Blown glass.]
- III. Decorated vessels. Arretine ware, molded lamps. [Blown glass, colored and ornamented with spun glass.]

## A. CATALOGUE OF ISRAELITE POTTERY

## I. Ordinary pottery.

1. Two-handled water jars of brown-black ware, showing micaceous particles or white limestone particles, with a smooth brown or red surface.
  - a. Reg. No. 1673, S2 between two eastern walls of temple by tunnel of S1 cistern 7, in yellow debris. Incised mark or letter on handle. See Pl. 64 g.
  - b. Reg. No. 3965, S4-401, courtyard floor, Aug. 18, 1910. Incised mark or letter on handle. See Fig. 153, No. 2.
  - b<sup>1</sup>. Dis. No. 541, S8-882, Sept. 22, 1910. Incised letter.
  - c. Dis. No. 542, S7-772, Sept. 26, 1910.
  - g. Dis. No. 1674-1675, Basilica 15, beside massive wall, yellow debris, July 10, 1909. See Fig. 153, No. 1.
2. Large two-handled water jars of hard, thick gray-black ware with a smooth gray slip. Examples a-g are ostraca.
  - a. Reg. No. 3864, S4-418 sub, Aug. 12, 1910.
  - b. Reg. No. 3916, S4-417 sub, Aug. 15, 1910. (Slip gone.)
  - c. Reg. No. 3917, S4-417 sub, Aug. 15, 1910. (Slip gone.)
  - d. Reg. No. 3934, S4-417 sub, Aug. 16, 1910.
  - e. Reg. No. 3991, S4-417 N sub, Aug. 19, 1910.
  - f. Reg. No. 4581, S7-776 sub, Sept. 20, 1910.



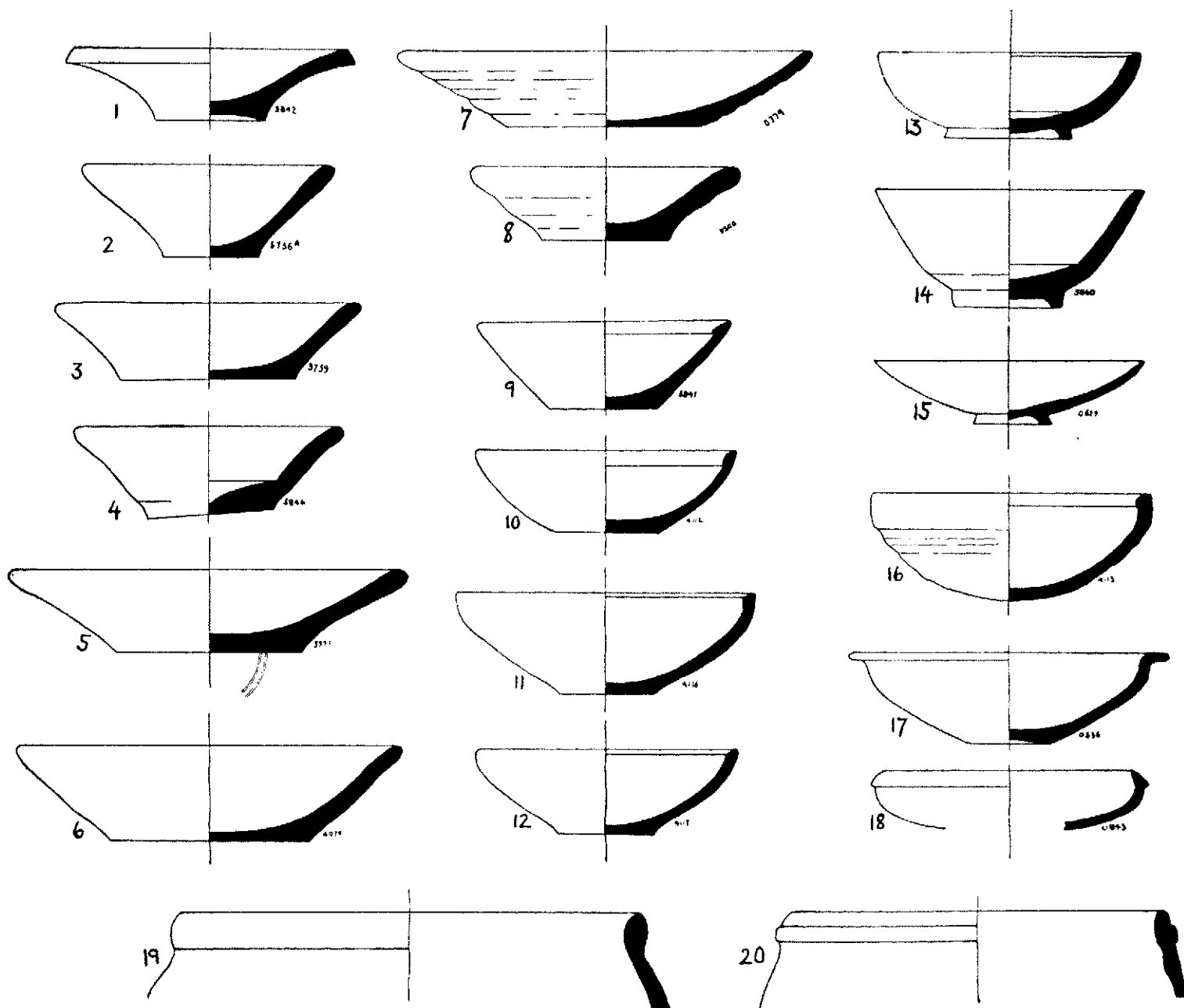
153. Israelite pottery, ordinary ware. Scale, 1:4.

- d. Dis. No. 477, S7 cave, Sept. 12, 1910.
- e. Dis. No. 78, S2 under Severus pilaster, Sept. 26, 1910.
- f. Dis. No. 41, S2 vestibule yellow debris, Sept. 28, 1910.
- g. Reg. No. 4583, S7-776 sub, Sept. 20, 1910.
- h. Dis. No. 30, S1 cistern 7 (post-Israelite), July 5, 1909.
- i. Dis. No. 1678, Basilica 6, north of massive wall in yellow debris, July 13, 1909.

3. Large jar<sup>1</sup> of hard, thin, gray-black ware with gray or pinkish wet-smoothed surface (hardly a slip). All the examples are ostraca. Cf. Fig. 165, No. 2a.
  - a. Reg. Nos. 3889, 3891, 3894, S4-417 sub, Aug. 15, 1910.
  - b. Reg. Nos. 3898, 3899, S4-418 sub, Aug. 15, 1910.
  - c. Reg. No. 3931, S4-417 sub, Aug. 16, 1910.
  - d. Reg. No. 3995, S4-417 N sub, Aug. 19, 1910.
  - e. Reg. Nos. 4030+4032, S4-417 N sub, Aug. 22, 1910.
  - f. Reg. No. 4031, S4-417 N sub, Aug. 22, 1910.
  - g. Reg. No. 4171, S7-773 sub, Sept. 1, 1910.
  - h. Reg. No. 4582, S7-776 sub, Sept. 20, 1910.
  - i. Reg. No. 4660, S7-772 W sub, Sept. 26, 1910.
4. Smaller two-handled jar like 1, with square shoulder.
  - a. Reg. No. 3849, S4-334 E in disturbed yellow debris above courtyard floor, Aug. 10, 1910. H. 2.6 cm. (neck broken off). See Fig. 153, No. 3, and Pl. 64 a.
  - b. Dis. No. 243, S3 f, Sept. 23, 1909.
  - c. Dis. No. 958, S9-909 sub, Sept. 6, 1910.
5. Small jug with two handles on square shoulder, flat base.
  - a. Dis. No. 345, S3-324, Oct. 12, 1909. H. 9.2 cm. (mouth broken off). See Fig. 153, No. 4.
6. Small jar, round bellied, with four loop-handles in the shoulder, of brown ware with smooth brown surface.
  - a. Dis. No. 342, S3-306, Oct. 7, 1909. See Fig. 153, No. 5, and Pl. 64 i.
7. Handled jug with bulging body, of reddish yellow ware. All examples are ostraca.
  - a. Reg. No. 3902+3906, S4-417 sub, Aug. 15, 1910.
  - b. Reg. No. 3909, S4-417 sub, Aug. 15, 1910.
  - c. Reg. No. 3932, S4-417 sub, Aug. 16, 1910. Attachment of handle preserved.
  - d. Reg. No. 3933+3903, S4-417 sub, Aug. 15-16, 1910.
8. Small jug with one handle and flat bottom, brown ware, red hæmatite wash.
  - a. Reg. No. 3740, S4-356 sub, in disturbed yellow debris, Aug. 4, 1910. H. 5 cm. (neck broken off). See Fig. 153, No. 6, and Pl. 64 n.
  - b. Reg. No. 3738, with a. H. 5 cm. (neck broken off). See Fig. 153, No. 7.
9. Small jug, with one handle, round bottom, brown ware, red wash.
  - a. Reg. No. 3737, S4-356 sub, in disturbed yellow debris, Aug. 4, 1910. H. 6 cm. (mouth broken off). See Fig. 153, No. 8.
  - b. Reg. No. 3741, with a. H. 7 cm. (mouth broken off). See Fig. 153, No. 9, and Pl. 64 o.
10. Jug, wide mouth, one handle, concave bottom, red ware, red wash.
  - a. Reg. No. 3706, S4-332 sub, Aug. 1, 1910. H. 15 cm. See Fig. 153, No. 10.
11. Small jug, wide mouth, one handle, convex bottom. Red ware.
  - a. Reg. No. 3508, S4-361 sub, in disturbed yellow debris, July 14, 1910. See Fig. 153, No. 11.
12. Ring stand, hard red or drab ware.
  - a. Reg. No. 3450, S4-361 sub, July 12, 1910. Gray ware with drab surface. H. 13 cm. See Fig. 153, No. 14.
  - b. Reg. No. 4049, S8-803 sub, Aug. 22, 1910. Gray ware with brown surface. Diam. 12.5 cm. H. 4 cm. See Fig. 153, No. 15.
  - c. Dis. No. 545, S7-772 sub, Sept. 15, 1910. Hard red ware. Diam. 20 cm.; H. 12 cm. See Fig. 153, No. 13.
13. Flaring bowl, flat bottom, sometimes slightly concave, concave sides. Brown or drab ware, red mouth.
  - a. Reg. No. 3842, S4-404 sub, Aug. 10, 1910. See Fig. 154, No. 1.
  - b. Reg. No. 3707, S4-332 sub, Aug. 1, 1910. Diam. 19 cm. H. 5 cm.
  - c. Dis. No. 500, S7-750 yellow debris, Sept. 9, 1910. Two bowls of about size of above. Fig. 154, No. 8.
14. Flaring bowl with flat bottom and straight sides. Red or brown ware, brown or black core, red wash.
  - a. Reg. No. 3736a, S4-356 sub, in yellow debris, Aug. 4, 1910. Fig. 154, No. 2, and Pl. 64 l.
  - b. Reg. No. 3739, S4-356 sub, in yellow debris, Aug. 3, 1910. Fig. 154, No. 3.
  - c. Reg. No. 3729, S4-342 sub, in yellow debris, Aug. 3, 1910.
  - d. Reg. No. 3843, S4-404 sub, Aug. 10, 1910.  
Most of the Israelite ostraca are fragments of bowls of this sort (Reg. Nos. 3855, 3863, etc.). Some examples are slightly misshapen:
  - e. Reg. No. 3844, S4-404 sub, Aug. 10, 1910.
  - f. Reg. No. 3845, S4-404 sub, Aug. 10, 1910. See Pl. 64 e.
  - g. Reg. No. 3846, S4-404 sub, Aug. 10, 1910. See Fig. 154, No. 4, and Pl. 64 f.  
Drab or gray ware with red wash:
  - h. Reg. No. 3993, S4-417 N sub, Aug. 19, 1910. See Fig. 154, No. 5. Ostrakon.
  - i. Reg. No. 4075, S4-417 sub, Aug. 23, 1910. Fig. 154, No. 6. Ostrakon.
  - j. Dis. No. 379, S4-772 sub, Fig. 154, No. 7.
  - k. Reg. No. 3751, S4-333 sub, Aug. 5, 1910.  
Yellow drab ware, wash faded yellow-brown (originally red?):
  - l. Reg. No. 4525, S7-772 sub, Sept. 16, 1910. Ostrakon.

<sup>1</sup>Probably the cylindrical jar described by Macalister, Gezer, II, p. 198, Fig. 352.

- m. Reg. No. 4580, S7-773 sub, Sept. 20, 1910. Ostracon.  
 n. Reg. No. 4629, S7-772 sub, Sept. 23, 1910. Ostracon.  
 o. Reg. No. 4614, S7-772 sub, Sept. 22, 1910. Ostracon. Other examples among ostraca.
15. Hollow bowl with flat base. Brown ware, red wash.  
 a. Reg. No. 4555+4556+4579, S7-773, Sept. 19, 1910. Ostracon.  
 b. Reg. No. 4627, S7-772, Sept. 23, 1910. Ostracon.
18. Hollow bowl with flat base. Drab.  
 a. Reg. No. 4527, S7-772, Sept. 16, 1910.  
 b. Reg. No. 4117, S7-720 sub, Aug. 25, 1910. Fig. 154, No. 12. Drab ware, no wash visible.  
 c. Reg. No. 4116, S7-720 sub, Aug. 25, 1910. Fig. 154, No. 11.
19. Hollow bowl with ring foot, brown ware, red wash.  
 a. Reg. No. 4619, S7-772 sub, Sept. 22, 1910. Ostracon. Fig. 154, No. 13. Drab ware, red wash:  
 b. Dis. No. 380, S7-772 sub, Sept. 22, 1910.



154. Israelite pottery, bowls, ordinary ware. Scale, 1:4.

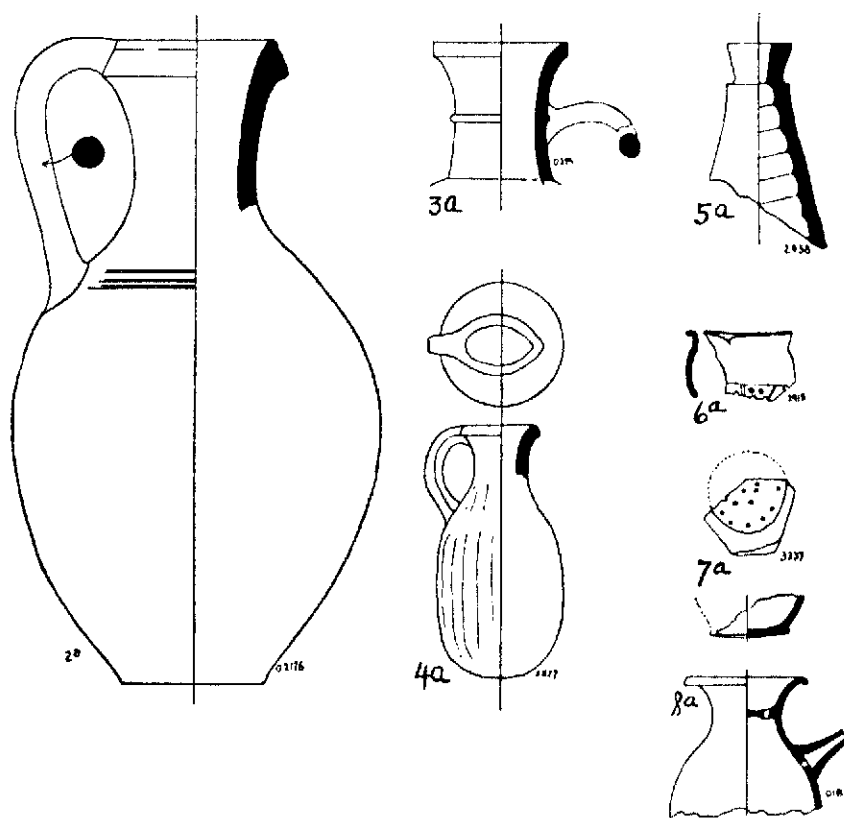
16. Bowl with slight, underlined rim inside. Drab ware, red wash.  
 a. Reg. No. 3841, S4-404 sub, Aug. 10, 1910. See Fig. 154, No. 9.
17. Hollow bowl with slight, underlined rim inside. Drab ware, red wash.  
 a. Reg. No. 4112, S7-720 sub, Aug. 25, 1910. Fig. 154, No. 10.
20. Flaring bowl with ring foot. Drab ware, wash faded.  
 a. Reg. No. 3860, S4-333 sub, Aug. 11, 1910. See Fig. 154, No. 14.  
 b. Reg. No. 4630, S7-772 N, Sept. 23, 1910. Drab ware, red wash:  
 c. Reg. No. 3448, S4-334 sub, July 12, 1910. See Pl. 64 d.



21. Wide plate with ring foot. Red ware.
  - a. Dis. No. 629, S8-821 sub, Sept. 14, 1910. Fig. 154, No. 15.
22. Hollow bowl, round bottom. Drab ware, wet-smoothed.
  - a. Reg. No. 4113, S7-720 sub, Aug. 25, 1910. Fig. 154, No. 16.
23. Deep dish, wide flat projecting rim, flat bottom. Drab ware.
  - a. Dis. No. 336, S3-306 disturbed yellow debris, Oct. 6, 1909. Fig. 154, No. 17.
  - b. Dis. No. 39, S1 cist. 7 tunnel, Sept. 1, 1909. Similar dishes were found in chamber. See p. 62.
24. Dish with rim. Drab ware.
  - a. Dis. No. 843, S9-912 sub, Sept. 19, 1910. Fig. 154, No. 18. See S1 cist. 7, Fig. 169, No. 19 a.
25. Dish on a hollow stand (one piece). Red ware, red wash.
  - a. Dis. No. 2188, Bas. N., Aug., 1909. See Fig. 153, No. 12.
26. Saucer lamp, of red ware, black core, red wash. Roll rim, one spout.
- a. Reg. No. 3709, S4-341 sub, yellow debris, Aug. 2, 1910. See Fig. 187, No. 1a, and Pl. 64 b.
- b. Reg. No. 2601, S4 b W, Oct. 25, 1909.
27. Saucer lamp of drab ware. Flat rim.
  - a. Reg. No. 2873, S. G. T. 5, June 20, 1910. See Fig. 187, No. 4a and Pl. 64 c.
  - b. Reg. No. 2984, S. G. T. 4, June 23, 1910.
28. Saucer lamp, hollow bowl, of red ware. Two spouts.
  - a. Dis. No. 1677, Bas. N., Aug., 1909. Fragment. See Fig. 187, No. 2a.
29. Saucer lamp, with seven spouts, on a hollow stand. Drab ware, red wash.
  - a. Reg. No. 2828, N. G. T. 5, June 6, 1910. See Fig. 187, No. 3a.
  - b. Reg. No. 3545, S5 f, July 18, 1910.
30. Crucible or lamp. Crude gray ware (mud ware).
  - a. Reg. No. 4401, S9-913 sub, Sept. 6, 1910. See Fig. 187, No. 6a and Pl. 64 j.
31. Wide-mouthed cooking pots, probably with handles (cf. Fig. 168, Nos. 9, 10). Only fragments were found, in the floor layer of the Ahab courtyard. See Fig. 154, Nos. 19 and 20.

## II. Finer pottery.

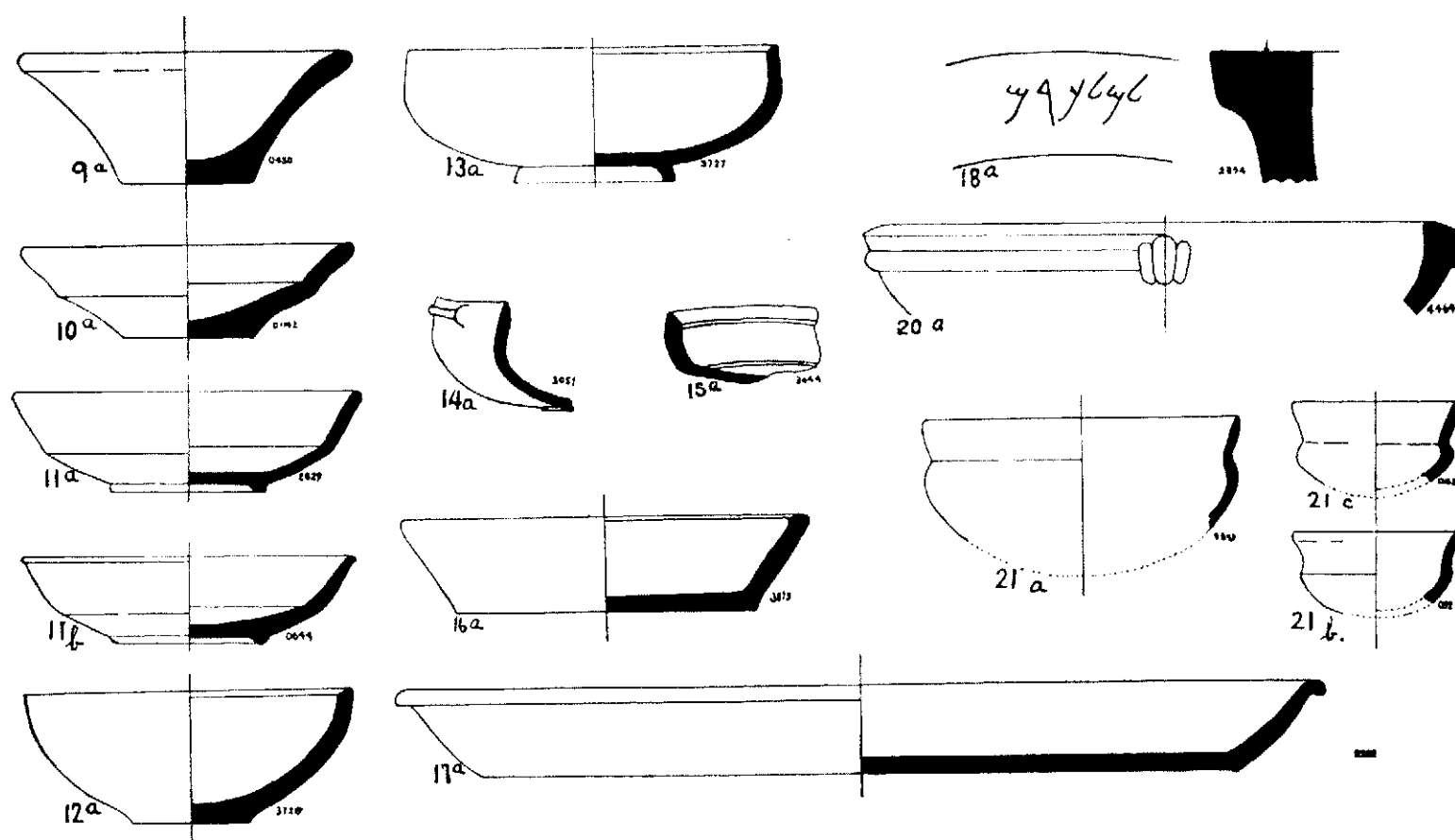
See Figs. 155 and 156, where each piece is designated by the list number.



155. Israelite pottery, burnished ware. Scale, 1:4.

1. Jar (two-handled?) with pointed base. Fine yellowish-gray ware, red wash, pebble-burnish.
  - a. Dis. No. 419, S5 h, July 8, 1910. Fragment of base only.

2. One-handed jugs of fine yellowish-gray ware, red wash, pebble-burnish. See Bas. cist. 3, Fig. 161.
3. Large jug with neck-handle. Fine brown ware, red wash, pebble-burnish.
  - a. Dis. No. 395, S4, east of room 334, in yellow debris, Aug. 2, 1910. Neck and mouth only.
4. Jug with lip-handle, spout lip, round bottom. Smooth reddish-brown ware with widely separated burnished lines (vertical).
  - a. Reg. No. 2827, N. G. T. 6, June 16, 1910. H. 12.5 cm. See Pl. 67 d.
5. Part of a vessel. Conical form with mouth at small end, broken off at the other. Smooth light-
9. Flaring bowl, flat bottom, concave sides. Brown ware, red pebble-burnish inside.
  - a. Dis. No. 450, L. T. E., July 14, 1910.
10. Flaring bowl, flat bottom, bent sides. Drab ware, red wash, pebble-burnish inside.
  - a. Dis. No. 1142, S11-5 sub, Oct. 11, 1910.
11. Flaring bowl, ring foot, bent sides. Red-brown ware, red wash, pebble-burnish inside and on rim.
  - a. Reg. No. 2829, N. G. T. 3, June 6, 1910.
  - b. Dis. No. 644, S8-880, Sept. 26, 1910.
  - c. Reg. No. 3454, S5 h E, July 12, 1910.
  - d. Reg. No. 3453, S5 h E, July 12, 1910. See Pl. 64 h.



156. Israelite pottery, bowls, burnished ware. Scale, 1:4.

6. Strainer jar with handles. Red ware with black core, dull pebble-burnish.
  - a. Reg. No. 2912, S2-7, June 21, 1910. Fragment.
7. Strainer jar, with flat base pierced with holes. Fine reddish-brown ware, red wash, bright pebble-burnish.
  - a. Reg. No. 3337, S5 e, July 5, 1910. Fragment.
8. Spout jug with strainer in neck (handle on side at right angles to spout?). Fine yellowish-gray ware. The original wash, where it had run down inside strainer, was red. Black, pebble-burnish.
  - a. Dis. No. 18, S1 in hole south of bath basins, June 9, 1909. Fragment.
12. Hollow bowl, flat bottom. Brown ware, red wash and pebble-burnish inside.
  - a. Reg. No. 3728, S4-342 sub, Aug. 3, 1910.
13. Hollow bowl, ring foot. Red-brown ware, red wash and pebble-burnish inside and on rim.
  - a. Reg. No. 3727, S4-342 sub, Aug. 3, 1910.
  - b. Reg. No. 3729a, S2-7 sub, June 22, 1910. Rim not burnished.
14. Hollow bowl, ring foot, solid ledge-handle on edge. Drab ware, red wash, pebble-burnish.
  - a. Reg. No. 3051, S. G. T. 3, June 25, 1910.
15. Flaring bowl, flat bottom, concave sides. Brown ware, red pebble-burnish inside.
  - a. Reg. No. 4925, S11-9, before mouth of cave, Oct. 22, 1910. Inscribed fragment.
16. Flaring bowl, flat bottom, bent sides. Drab ware, red wash, pebble-burnish inside.
  - a. Reg. No. 4617, S7-772, Sept. 22, 1910. Ostrakon.

15. Fragment of dish with rounded sides. Buff ware, red wash inside and on rim. Two unwashed bands inside showing natural color. Pebble-burnished outside.
  - a. Reg. No. 3444, S5-364, July 12, 1910. Fragment.
16. Deep plate, straight, sloping sides. Brown ware, red wash. Burnished.
  - a. Reg. No. 3873, S4-418 sub, Aug. 13, 1910. Ostrakon.
17. Wide deep tray, with narrow rim. Brown ware, red wash and pebble-burnish inside.
  - a. Dis. No. 382, S4-418 sub, Aug. 13, 1910. Diam., 50 cm.
18. Wide deep tray, with heavy horizontal rim. Red ware (black core), red wash and pebble-burnish all over.
  - a. Reg. No. 2854, surface of a field on southern slope, between Street of Columns and Herodian Wall, June 18, 1910. Inscribed fragment. See Pl. 55 a.
19. Deep bowl, with broad horizontal rim (like Fig. 154, No. 17). Drab ware, red wash, pebble-burnish.
  - a. Dis. No. 843, S9-912 sub, Sept. 19, 1910.
20. Large bowl, with rim, molding and relief ornament (handles). Gray ware, red wash, pebble-burnish inside and on rim.
  - a. Reg. No. 4464, S7-755, Sept. 12, 1910.
21. Hollow bowl, with recurved rim. Brown or red ware, red wash, pebble-burnish inside and over rim.
  - a. Dis. No. 849, S9-940, Sept. 17, 1910. Diam., 17 cm.
  - b. Dis. No. 92, S2-51 sub, deep, Sept. 2, 1909.
  - c. Dis. No. 153, S2 portico, street sub, Sept. 30, 1910. Diam., 9 cm.

### III. Early decorated pottery, mostly Greek.

See Figs. 157 and 158, where each piece is designated by the list number.

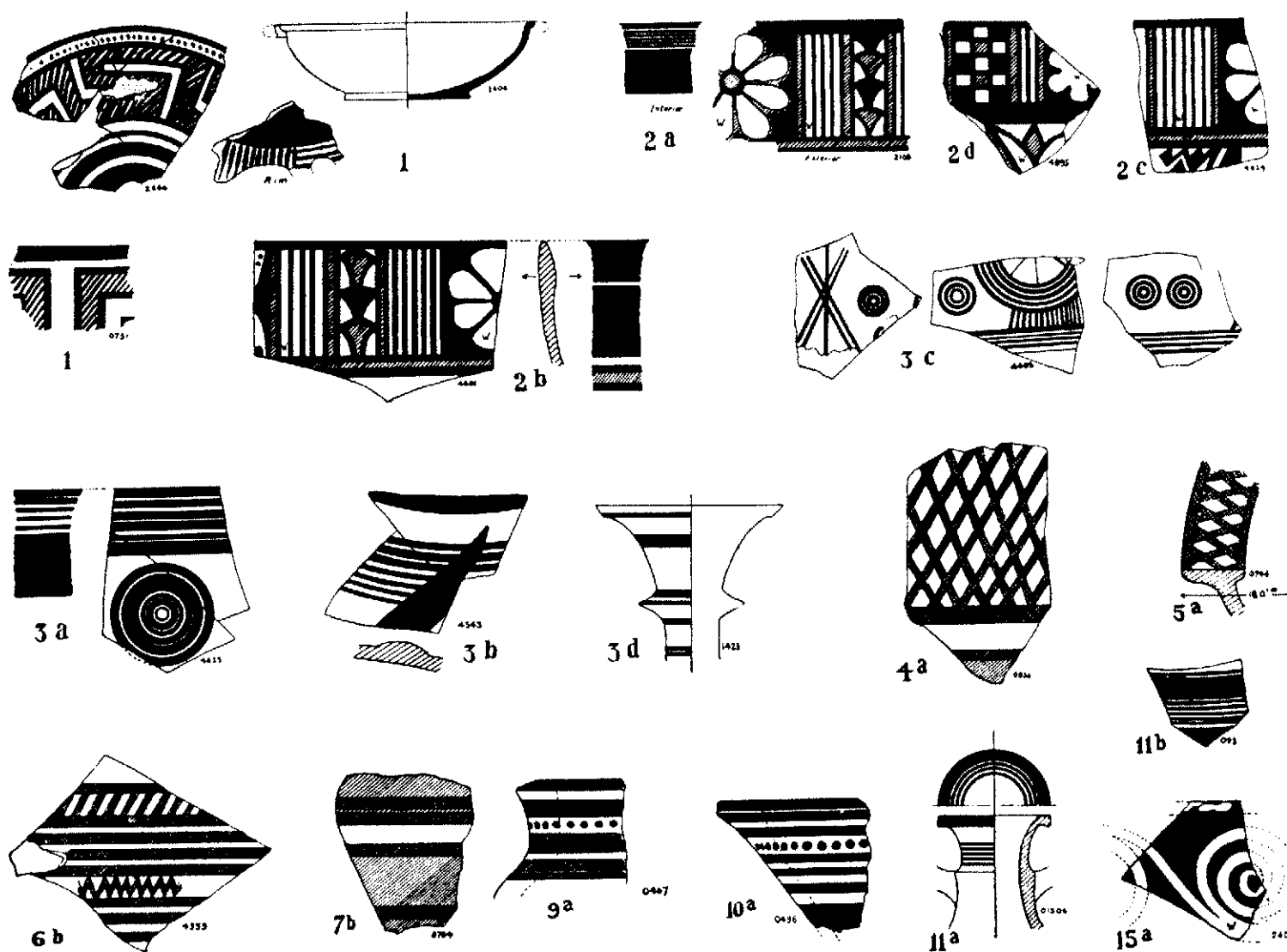
1. Wide bowl with rim handle and finger rest, of red-brown ware with a yellowish slip, with a meander pattern in black lines outside. See Pl. 69 d and Walters, *History of Ancient Pottery*, I, p. 281.
  - a. Reg. No. 2604, S4 b W, in mixed yellow and black debris, where the Roman wall had broken the older strata and had itself been mostly removed by modern stone-thieves, Oct. 25, 1909. See Pl. 69 d.
  - b. Dis. No. 731, small fragment, S8 d N along Greek Fort Wall, deep, Sept. 19, 1910.
2. Bowl of fine red ware with a yellowish-white slip, painted with rosette, flower, and geometrical pattern in red, black, and dark brown outside, and with circular bands of same colors inside. See Pl. 69 and Walters, I, p. 253-4.
  - a. Reg. No. 2168, S3 c N of street and about level with its floor, Oct. 4, 1909. Pl. 69 c.
  - b. Reg. No. 4601, S8 d S, deep black debris near Greek Fort Wall, Sept. 21, 1910. Pl. 69 b.
  - c. Reg. No. 4624, S8 e deep, black debris W of Greek Fort Wall, Sept. 22, 1910.
  - d. Reg. No. 4895, S11 v below floor of subterranean corr., Oct. 18, 1910. Pl. 69 a.

These are from four different vessels, although a resembles b, and c resembles d.
3. Bowl and jug of thin, fine red ware, burnished red wash, geometric decorations (concentric circles) in black lines and bands. See Walters, I, p. 251.
  - a. Reg. No. 4625 (bowl), S8-818 deep, Sept. 22, 1910. See Pl. 69 j.
  - b. Reg. No. 4563 (jug), S8 c southern edge, deep, Sept. 19, 1910.
  - c. Reg. No. 4685 (jug), S8-840, Sept. 28, 1910.

It is noteworthy that 2 b and c, and 3 a, b, and c were all found in the same deep black debris in the same neighborhood.

  - d. Reg. No. 1423 (mouth of a small one-handled jug), Bas. 13 sub, Aug. 8, 1909.
  - e. Dis. No. 540 (jug), S7-772, Sept. 22, 1910.
4. Fragment of vessel with rectangular holes in side, of gray ware, red surface, painted with lattice pattern in brown and bands of brown and red.
  - a. Dis. No. 836, S9-907 sub, Sept. 16, 1910.
  - b. Dis. No. 852 (bands only), S9-940, Sept. 17, 1910.
5. Fragment of bowl with broad horizontal rim, of buff paste, pebble-polished, brown lattice pattern on rim.
  - a. Dis. No. 746, S8 d deep, beside Greek Fort Wall, Sept. 22, 1910.
6. Fragment of vessel, light red ware, buff surface, decorated with brown zigzag pattern and bands.
  - a. Dis. No. 714, S8 d, Sept. 14, 1910.
  - b. Reg. No. 4359 (rubbed surface), S7 west of 751, deep, Sept. 5, 1910. See Pl. 69 i.
7. Fragment of jar, light buff paste, wet-smoothed, decorated with broad red and narrow brown bands.
  - a. Dis. No. 966, S10-1014 sub, Sept. 6, 1910.
  - b. Dis. No. 764, S8 e beside Greek Fort Wall, Sept. 23, 1910.
8. Fragment of jar, fine red or brown paste, pebble-polished, decorated with bands of red.
  - a. Dis. No. 625, S8-821, Sept. 15, 1910.
  - b. Dis. No. 835, S9-906, deep, Sept. 17, 1910.

9. Fragment of neck of jar, of buff ware, burnished surface decorated with brown bands and dots.  
a. Dis. No. 467, S7 NW corner, Sept. 5, 1910.
10. Fragment of rim of bowl of burnished hard red ware, decorated with black bands and dots.  
a. Dis. No. 496, S7 near cist. 5, Sept. 22, 1910.
11. Fragments of jug, two handles, of drab paste, decorated with brown bands and lines.  
a. Dis. No. 1506, L. T. 3 d 22, Sept. 15, 1909.  
b. Dis. No. 93, S2-51, Sept. 2, 1909.  
c. Dis. No. 1252, S11-901 cistern, Oct. 11, 1910.  
d. Dis. No. 1257, S11 x, Oct. 14, 1910.
12. Fragment of bowl (like Fig. 156, No. 21 b) of fine gray paste, decorated with narrow brown bands.  
a. Dis. No. 957, S9 N of 908 sub, Sept. 6, 1910.
15. Fragment of a vessel of brown paste, dull black slip, decorated with tangent spiral pattern in white.  
a. Reg. No. 2409, S3 f above Greek Fort Wall, Oct. 1, 1909. See Pl. 69 k.
16. Fragment of bulging-bodied vessel of gray ware, with a smooth brown surface, painted with broad white bands, each outlined with two narrow red bands.  
a. Reg. No. 4535, S7-773, Sept. 16, 1910. See Pl. 69 e.  
b. Reg. No. 4536, S7-773, Sept. 16, 1910. See Pl. 69 e.
17. Fragment of small pointed jar, black ware with red surface, decorated with two dark-red bands, and a spiral band of white.  
a. Dis. No. 847, S9-940, Sept. 16, 1910.



157. Early decorated pottery, mostly Greek. Scale, 1:2. For color key see Fig. 158.

13. Fragment of handled jar of brown ware, with smooth gray surface (slip?) decorated with concentric circles in purple and bands of purple and black.  
a. Dis. No. 398, S4-366 sub, Aug. 19, 1910.
14. Fragments of buff ware with red and purple bands.  
a. Dis. No. 440, L. T. E., July 14, 1910.
18. Fragment of vessel with square holes in side, black ware with red surface, decorated with bands of dull red, black, and white.  
a. Dis. No. 61, S2 S of IV 13, Sept. 7, 1909.
19. Fragment of jar of red ware, smoothed wet, decorated with white and black bands.  
a. Dis. No. 66, S3-311 deep, Sept. 7, 1909.

20. Fragment of neck of jar, black ware, red surface, decorated with red and black bands.

a. Dis. No. 955, S9-907 sub, Sept. 6, 1910.

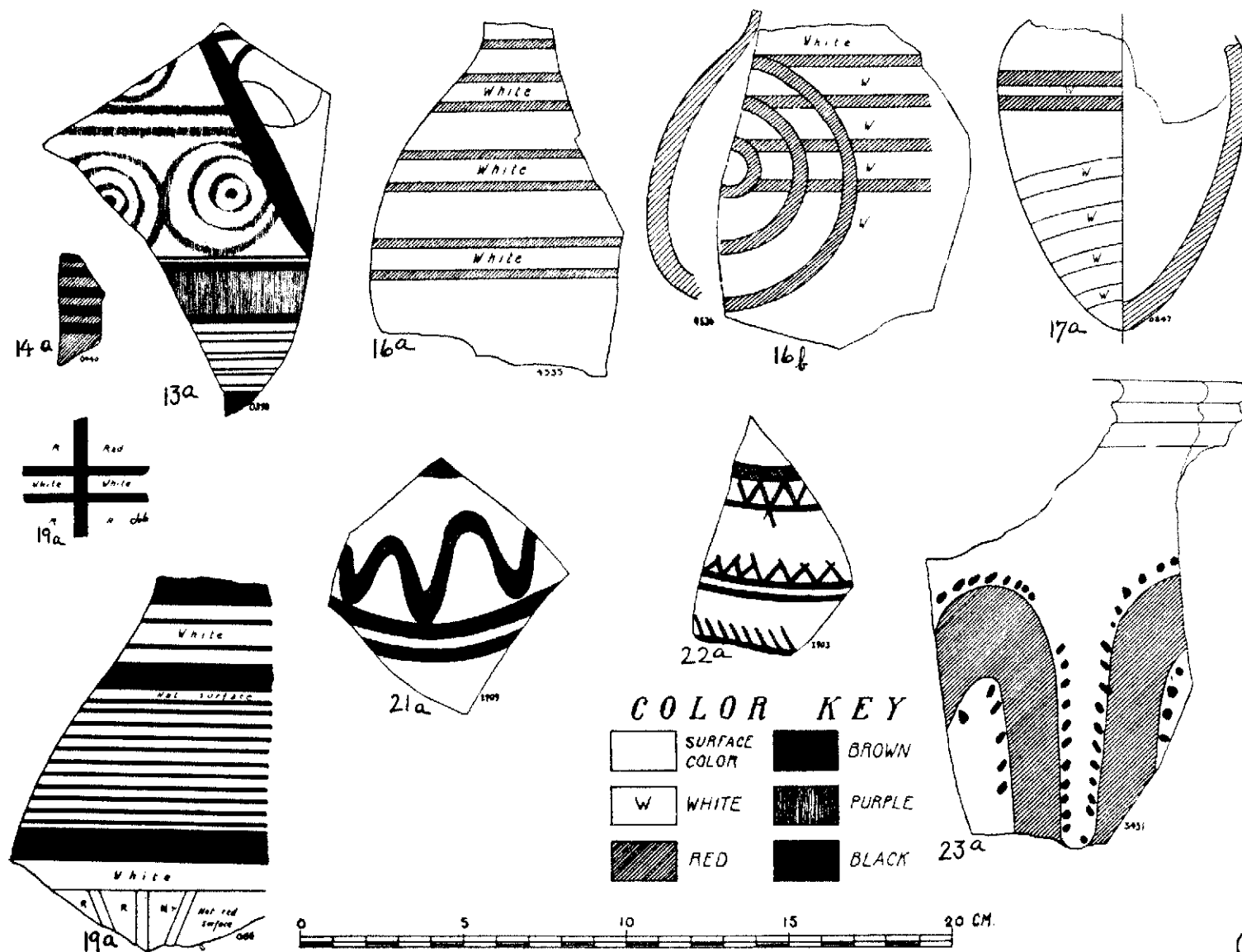
21. Fragment of a bulging-bodied vessel of fine buff ware with yellowish slip, three horizontal bands and one wavy band of black-brown.

a. Reg. No. 2909, S2-7 deep, June 21, 1910. See Pl. 69 g.

a. Reg. No. 3431, S5 h W, July 11, 1910. See Pl. 69 h.

24. Fragment of some large vessel (?) of fine gray-brown ware (soft), pebble-rubbed, and decorated with red bands. Cone-shaped pieces like great handles (one broken end) and pieces from the edge of some rectangular vessel or object.

a. Reg. No. 2988-2992, S. G. T. 4, June 23, 1910.



158. Early decorated pottery, mostly Greek. Scale, 1: 2.

22. Fragment of a bulging-bodied vessel of gray ware with light colored surface, decorated with five horizontal bands, a row of short oblique strokes, and two zigzags, all in brown.

a. Reg. No. 2903, S. G. T. 3, June 21, 1910. See Pl. 69 f.

23. Fragment from the rim of a large open vessel of hard brown ware with a light red slip, decorated with a broad sinuous band with a row of dots along each edge in dark red paint.

25. Hollow basin, with loop-handles and handle-ridge, decorated with lines; see Fig. 159, No. 1. Smoothed brown ware. Black core with micaceous particles.

a. Dis. No. 1301, H. S. 1, surface debris, June 19, 1909.

26. Jar, decorated with ridges and incised marks; see Fig. 159, No. 2. Smoothed brown ware, black core.

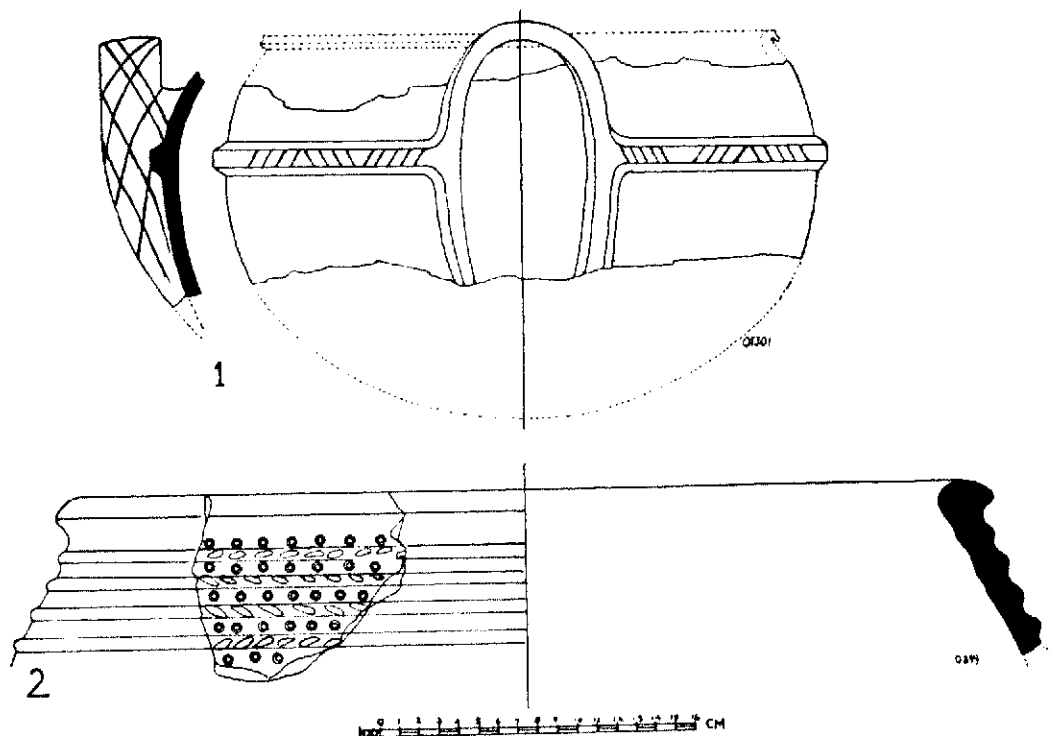
a. Dis. No. 399, S4-418 sub, Aug. 15, 1910.

#### IV. Pottery found at the Basilica.

In the debris of the compartments north of the apse of the Basilica, in the middle and lower levels of cistern 3, and among the massive walls which ran east and west underneath the

Basilica and the western side of the Forum, were found a number of potsherds of Israelite material and technique. For convenience, the chief pieces are described together as follows:—

- 1,2. Large two-handled jars of smooth brown ware, dark ware with gray surface, and drab ware (Israelite Pottery I 1-3). Mouth-rims, handles, and one base were found which seemed to give the form shown in the figure. These are both from north of the apse (Dis. Nos. 2171 to 2174), but similar fragments were found in all the places mentioned above.
3. Large two-handled jar of thin gray ware with drab or pink surface (cf. Israelite Pottery I 3, Babylonio-Grecian Pottery I 2 and Hellenistic Pottery I 1). This may be a later jar. The form given in the figure is an uncertain reconstruction. Fragments were found only in cistern 3.
4. Fragment of a square-shouldered jar of yellowish ware with red wash, found in cistern 3 (Dis. No. 2190 b).
- 5-8. Fragments of wide-mouthed pots (cf. Babylonio-Grecian Pottery I 2) of brown or red ware with red wash, or of gray or black ware with a drab slip. Examples were found in all places mentioned above.
- 9-13. Fragments of pitchers with one handle, of fine yellowish ware with a heavy red wash, usually dull burnished. With ring or hollow base. Many examples were found in all places mentioned above.
- 14-19. Fragments of bowls of fine drab ware, red wash, usually pebble-burnished. All these forms were found at all places mentioned above.
- 20-21. Fragments of bottles of fine drab ware with red wash. Both were found north of apse.
22. Bowl on a hollow stand, of fine drab ware, red wash. Found north of apse.
23. Base of round-bottomed jug of burnished red ware (no wash). Found north of apse.



159. Israelite pottery with incised decoration. Scale, 1:4.

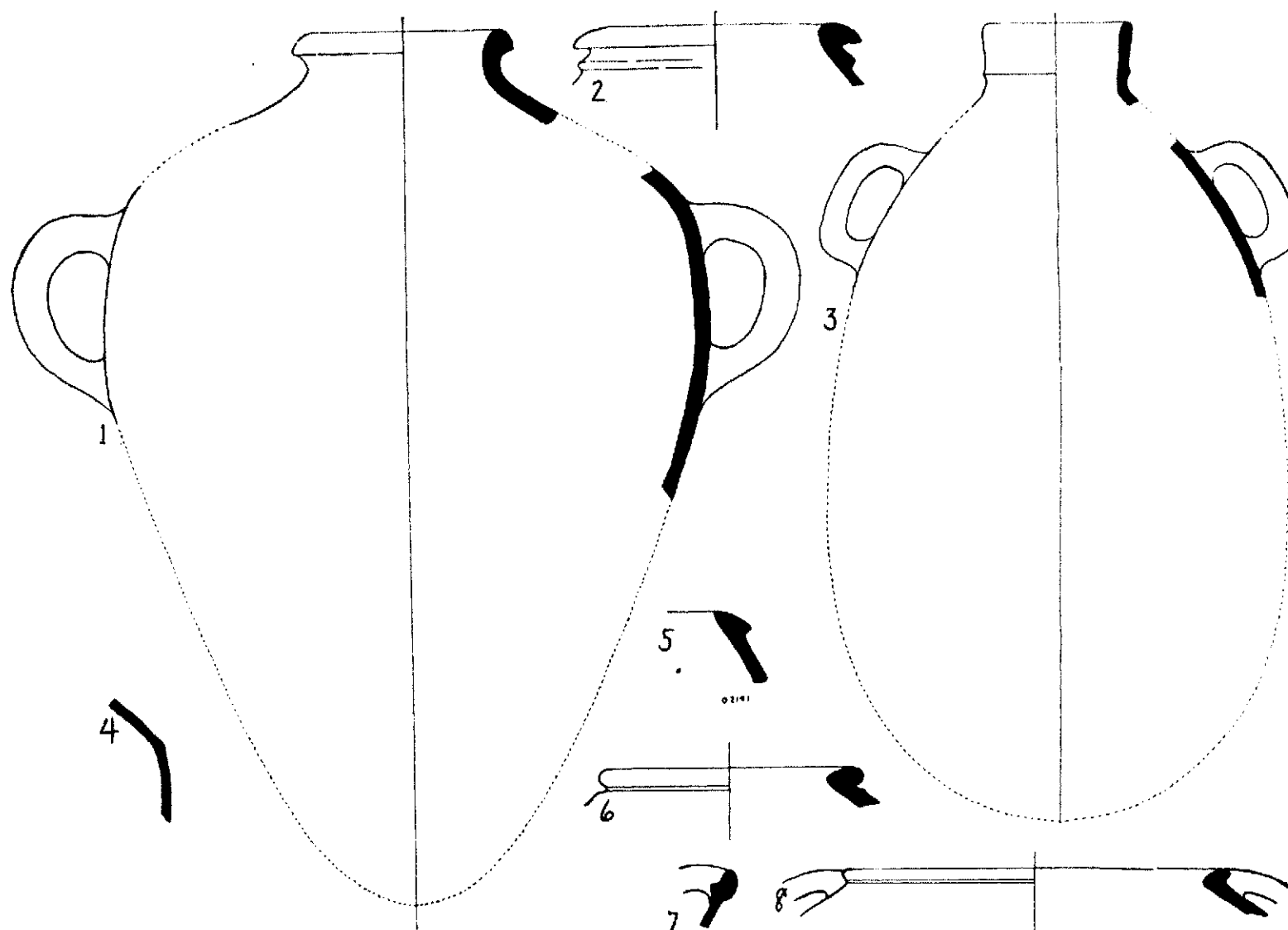
In addition to the above pieces, fragments of saucer lamps were found. One of these, Dis. No. 1677, with two spouts, is given above, *Isr. Pott. I* 28.

#### B. CATALOGUE OF BABYLONIO-GRECIAN POTTERY, 700-300 B.C.

Owing to the destruction of the buildings of the Babylonio-Grecian period, it was not possible to identify a particular sort of debris with this period. The chief point of reliance is S1 cistern 7, which is assigned to this period for the following reasons: 1. Its position under Greek walls; 2. Its Aramaic ostraca; 3. The presence of a red-figured fragment; 4. The resemblance of its potsherds to Israelite wares; 5. The absence of the characteristic Hellenistic wares.

In addition to the contents of this cistern we have the group of four pots found on the floor of room S3-314, the potsherds found with the red-figured krater in S. G. T., and a group

of pots which are technically related to the Israelite and cistern 7 groups, as distinguished from the Hellenistic group. That is, they present exclusively turned forms, none molded, thick red washes, and pebble-burnishing. In all cases there is naturally a certain doubt as to the date. Some of the pieces may be Israelite; but it is improbable that any are later than 300 B.C.



160. Pottery from the early deposits and from cistern 3 at the Basilica. Scale, 1:4.

# I. Ordinary pottery.

See Fig. 162.

1. Two-handled jars of smooth, coarse brown ware, similar to Israelite Pottery I 1.
  - a. Reg. No. 1517, H. S. 1, June 22, 1909. Handle, with letter A incised thereon.
  - b. Reg. No. 1516, H. S. 1, June 22, 1909. Handle, stamped with seal showing naked male figure. See Pl. 57 f 2.
  - c. Reg. No. 3308, S5 d, July 4, 1910. Handle stamped with seal showing a pomegranate. See Pl. 64 k.
2. Two-handled jars of gray ware, wet-smoothed. Cf. Israelite Pottery I 1 and Hellenistic Pottery I 2. See S1 cistern 7, below.
3. Large jar with bulging neck and two neck-handles. Smooth buff-brown ware.
  - a. Reg. No. 3486, L. T. E., July 13, 1910.
4. Large one-handled jug with narrow neck, of fine brown-red ware.
  - a. Reg. No. 3397, S5 h W, July 8, 1910.
5. One-handled jug, bulging, with ring base and cream slip, red bands.
  - a. Reg. No. 2424, S3-314, Oct. 6, 1909. See Pl. 67 b 1.
6. One-handled jug. Drab ware.
  - a. Reg. No. 2425, S3-314, Oct. 6, 1909. See Pl. 67 c. Cf. S1, cistern 7, below.
7. Small one-handled jug. Fine buff ware, cream slip.
  - a. Reg. No. 2423, S3-314, Oct. 6, 1909. See Pl. 67 b 2.

8. One-handed jug, with two unexplained objects on each side of cup-mouth. Red ware, gray core, red wash.

a. Reg. No. 2599, S4 f S, Oct. 23, 1909.

9. Askos-shaped jug. Fine brown ware, smoothed (almost burnished).

a. Reg. No. 2982, S. G. T. 4, June 23, 1910.

10. Curved vessel, with handle and spout. Fine brown ware, hard smoothed (almost burnished).

a. Reg. No. 4804, S11-6 sub, Oct. 10, 1910.

11. Small cylindrical cup, flat bottom. Brown ware, smooth.

a. Reg. No. 4175, S10 c, Sept. 1, 1910.

12. Small cylindrical cup, round bottom. Brown ware, smooth red surface.

a. Reg. No. 4805, S11-1 sub deep, Oct. 10, 1910.

3. Black-glazed, red paste vessels. See S1 cist. 7 and black-glazed pottery below.

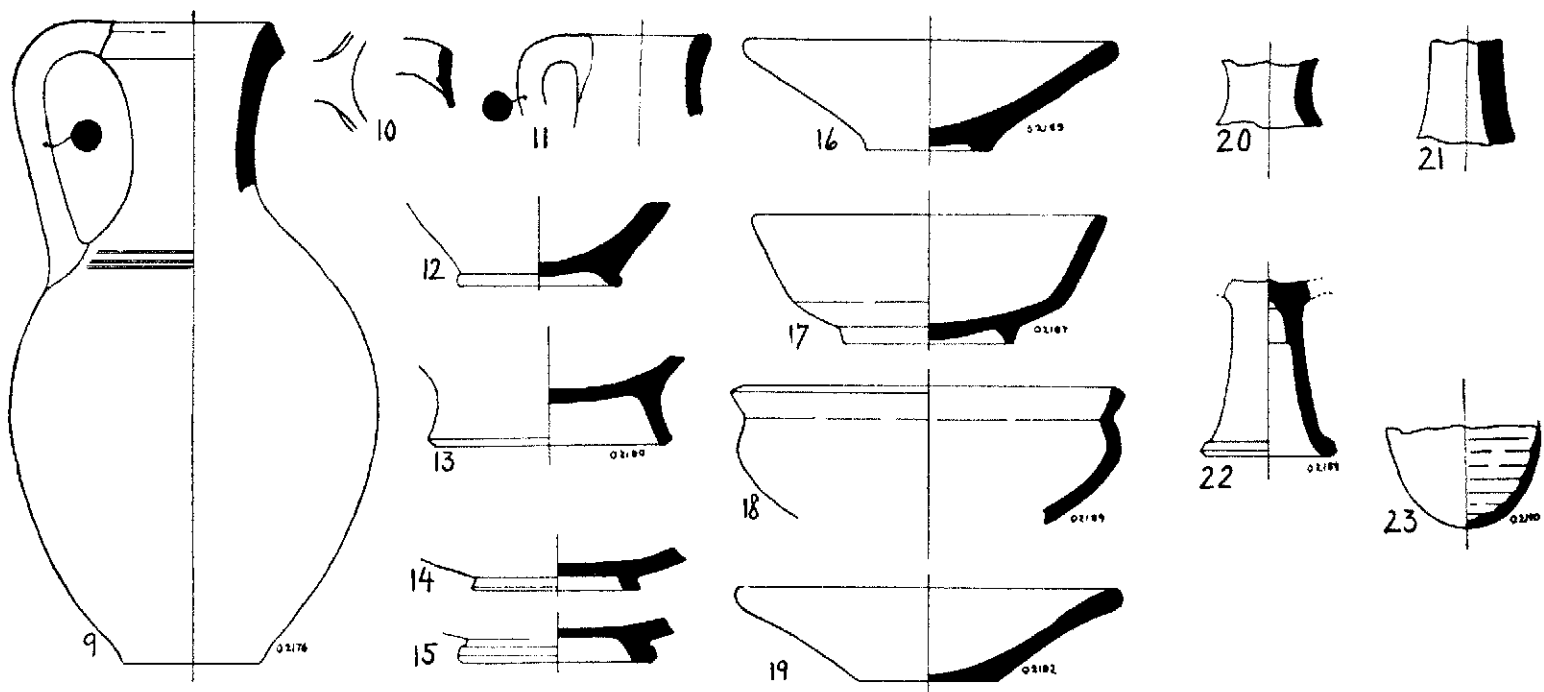
### III. Decorated pottery.

See Figs. 163 and 164.

1. Rhyton-shaped vessel, ending in small bull's head. Light red ware, hard-smoothed.

a. Reg. No. 1570, S2 S. of southern wall of Temple, July 23, 1909. See Pl. 68 b.

2. Bulging jar with Bes-head molded on side. Red ware. Similar vases are found in Egypt from late periods.



161. Pottery from the early deposits and from cistern 3 at the Basilica. Scale, 1:4.

- a. Reg. No. 3962, S7, in mixed debris north of Atrium, Aug. 18, 1910.

13. Plates, bowls, basins. See S1 cist. 7.

14. Bowl with incurving rim, disc base. Bottom inside decorated with wedge-shaped indentations. Red ware, black core.

a. Dis. No. 624, S8-821 S, Sept. 16, 1910.

### II. Finer pottery.

See Fig. 163.

1. One-handed jug with lip-spout. Fine gray ware, black burnished.

a. Reg. No. 4851, S11-23 cistern, Oct. 12, 1910. See Pl. 67 f.

2. Base of a jug or vase with spreading base. Light red ware, red burnished. Scratches in burnish, outline for color.

a. Reg. No. 1851, H. S. 1, July 31, 1909. See Pl. 67 e.

b. Reg. No. 2194, S3 a W, Oct. 6, 1909.

3. Handle of jug, twin stem. Fine drab ware, cream slip, decorated with dark brown lines.

a. Reg. No. 2445, S3 b, street, Oct. 7, 1909.

4. Bottle. Red-brown ware, gray core, decorated with horizontal stripes of dark brown-black.

a. Reg. No. 3378, S5 h E (with Israelite pottery), July 8, 1910. See Pl. 67 h.

5. Black-figured Greek ware.

a. Reg. No. 3459, cylix of minor artist type, L. T. E., July 13, 1910. See Pl. 71 c.

b. Reg. No. 3531, larger vessel (amphora?), L. T. N., July 16, 1910. See Pl. 71 e. These were both found in black debris in a modern agricultural terrace.

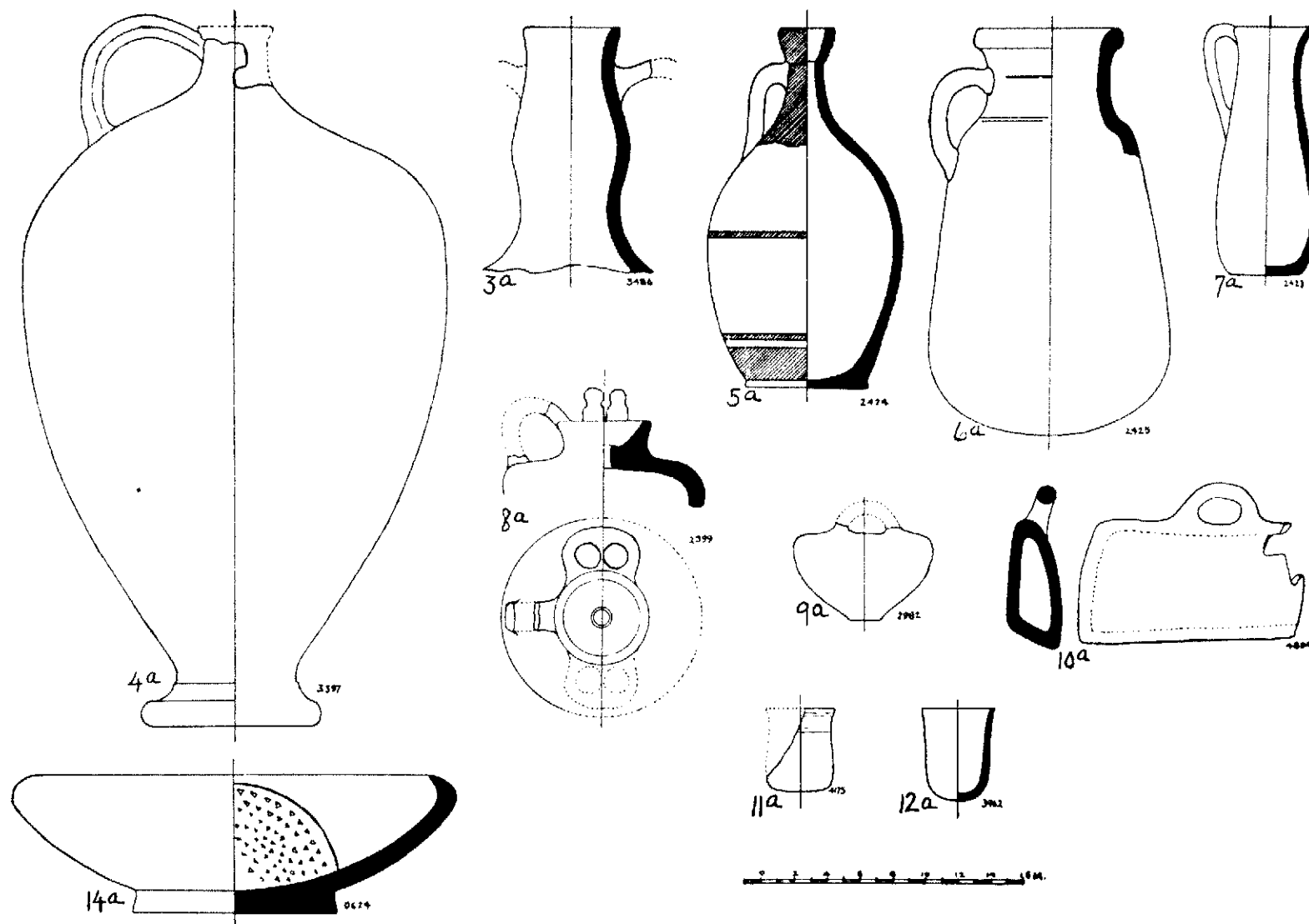
c. Reg. No. 3037, S. G. T. 3, June 24, 1910.



## 6. Red-figured Greek ware.

- a. Reg. No. 2914, a large bell-krater,<sup>1</sup> S. G. T. 7, June 21, 1910. Found in deep black debris, about 70 cm. above yellow Israelite debris, scattered over an area of about two square metres. In many pieces, but nearly complete. See Pls. 69 o; 70 a, b, and Walters, I, p. 421.
- b. Reg. No. 4523, bottom of a bowl, S9 outside Greek Fort Wall, deep, Sept. 16, 1910. See Pl. 71 f.

- l. Reg. No. 2981, S. G. T. 4, June 23, 1910.
- m. Reg. No. 3038, fragment of aryballos (?), S. G. T. 3, June 24, 1910.
- n. Reg. No. 3043, N. G. T. 11, June 24, 1910.
- o. Reg. No. 3108, from a small vessel, S5 a, June 28, 1910. See Pl. 71 g.
- p. Reg. No. 3162, S. G. T. 4, June 29, 1910.
- q. Reg. No. 3169, N. G. T. 6, June 30, 1910.
- r. Reg. No. 3596, S6 b, July 23, 1910. See Pl. 71 d.



162. Babylonio-Grecian pottery, ordinary ware. Scale, 1:4.

- c. Reg. No. 1834, H. S. 1 black vertical stratum, July 21, 1909. See Pl. 71 h 5.
- d. Reg. No. 1796, from a small vessel, vault cistern 2, Sept. 1, 1909.
- e. Reg. No. 1876, L. T. 1 b E, Aug. 18, 1909. See Pl. 71 h 1.
- f. Reg. No. 1891, from a small vessel, L. T. 1 c E, Aug. 20, 1909. See Pl. 71 h 3.
- g. Reg. No. 2159, S3 b, street E, Oct. 4, 1909. See Pl. 71 h 2.
- h. Reg. No. 2786, Roadway, Aug. 4, 1909. See Pl. 71 h 4.
- i. Reg. No. 2859, Fragments of a cylix, S2-7 black debris below the apsidal structure, June 18, 1910. See Pl. 71 a.
- j. Reg. No. 2895, S. G. T. 3, June 21, 1910.
- k. Reg. No. 2964, S. G. T. 6, June 22, 1910.

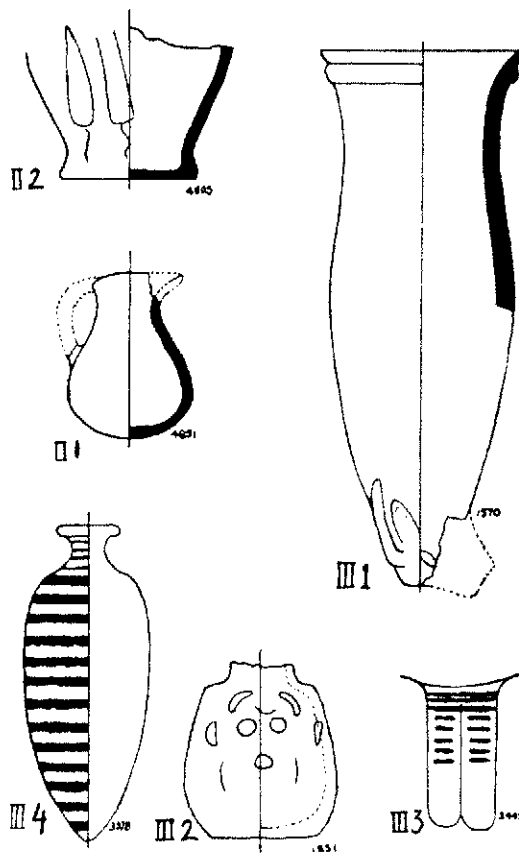
- s. Reg. No. 2058, L. T. 5, Sept. 11, 1909. See Pl. 71 h 6.
- Most of these pieces are Late Fine Style, but some of them, for example n, seem to be earlier. The fragments p and r are very late red-figured ware.

## 7. Red-figured Greek ware, fragments of vases showing decorated spaces.

- a. Reg. No. 2446, S3-313, Oct. 7, 1909.
- c. Reg. No. 2447, S3-313, Oct. 7, 1909.
- d. Reg. No. 2493, S3-316, Oct. 9, 1909. See Pl. 73 d 2.
- e. Reg. No. 2883, rim of krater, S2-7, June 20, 1910.
- f. Reg. No. 2919, rim of krater, N. G. T. 5, June 21, 1910.

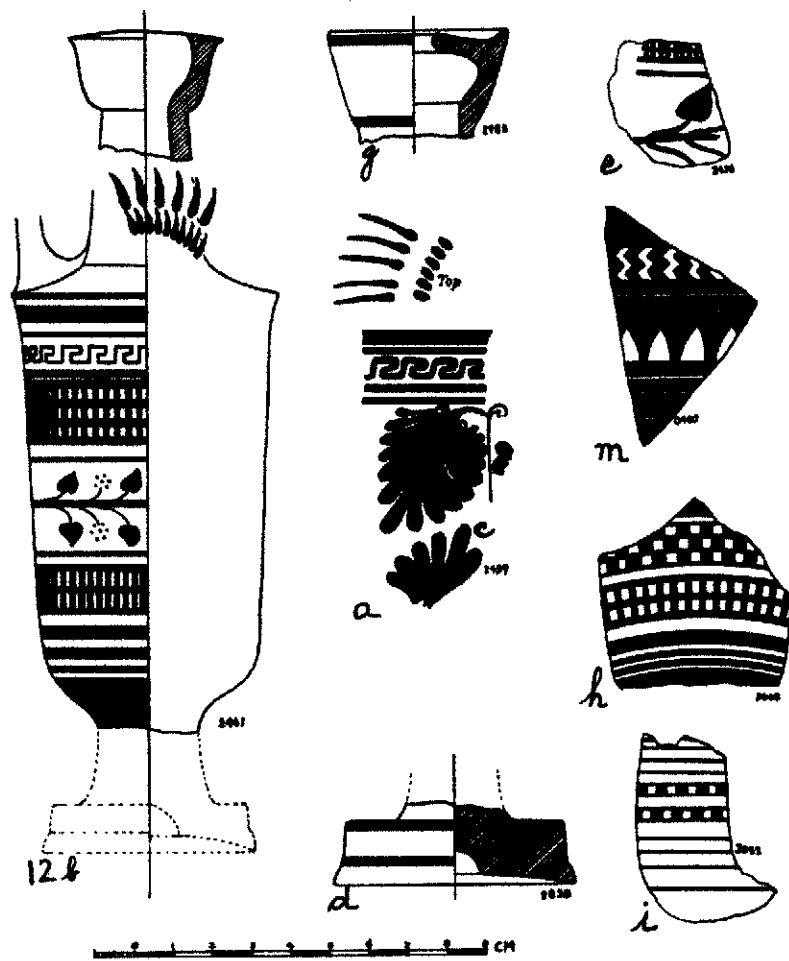
<sup>1</sup>Date estimated at about 430-420 B.C. by Dr. Duncan Mackenzie after examination of the original.

- g. Reg. No. 2957, rim of krater, S. G. T. 7, June 22, 1910.  
 h. Reg. No. 2980 (handle), S. G. T. 4, June 23, 1910.  
 i. Dis. No. 33, rim of krater, S1 cist. 7, July 6, 1909.  
 j. Dis. No. 1461, side of vessel, L. T. 5 d, Aug. 28, 1909.  
 k. Dis. No. 338, S3-306, Oct. 6, 1909.  
 l. Dis. No. 206, S3 b NE low, Oct. 5, 1909.  
 m. Dis. No. 123, S2 III 70, cist., Oct. 8, 1910.
8. Fragment of a vessel, of fine pink paste (like red-figured ware), with a crude decoration in black and brown.  
 Reg. No. 1855, Roadway, Aug. 4, 1909. See Pl. 71 h 7.
9. Fragment of a bowl of fine buff paste with a lustrous black slip. Around the outside a row of black palmettes, each enclosed in white curved line and separated by black tongues. Along bottom of pattern a row of white dots.  
 Reg. No. 2406, S3 c, Sept. 30, 1909. See Pl. 69 l.
10. Fragment of a bowl of fine buff paste, showing a buff pattern on a black background. At one end a palm-branch in white.  
 a. Reg. No. 3044, N. G. T. 11, June 24, 1910.  
 b. Dis. No. 324, S3 cist. in street, Oct. 21, 1909. See Pl. 73 j 6.  
 c. Dis. No. 1444, L. T. 4 c, Sept. 8, 1909.
11. Black-decorated fine red ware, lustrous black glaze.  
 a. Dis. No. 1403, L. T. 1 cave 3, Aug. 20, 1909.  
 b. Dis. No. 1530, L. T. 3 b under calidarium, Sept. 14, 1909.  
 c. Dis. No. 238, S3 f, Sept. 21, 1909.  
 d. Dis. No. 1524, L. T. 3 bath 39, Sept. 8, 1909. Rim of large basin with knob-handle on rim. See Pl. 73 j 1.
12. White-ground lekythi. Walters, I, p. 426, class 3; cf. Pottier, *Lécythes Blancs*.  
 a. Reg. No. 2459, palmette on front, tongue pattern on shoulder, S3-306, Oct. 8, 1909. See Pl. 69 n.  
 b. Reg. No. 2461, meander, checker and ivy pattern on front, tongue pattern on shoulder, S3-306, Oct. 8, 1909. See Pl. 69 m.  
 c. Reg. No. 2426, fragment like b, S3-314, Oct. 6, 1909. See Pl. 73 k 2.  
 d. Reg. No. 2835, foot, N. G. T. 3, June 16, 1910.  
 e. Reg. No. 2841, base of body, N. G. T. 4, June 16, 1910.  
 f. Reg. No. 2888, base of body, S. G. T. 2, June 21, 1910.  
 g. Reg. No. 2983, mouth, S. G. T. 4, June 23, 1910.
- h. Reg. No. 3048, base of body, S. G. T. 2, June 25, 1910.  
 i. Reg. No. 3052, base of body, S. G. T. 3, June 28, 1910.  
 j. Reg. No. 3020, fragment with palmette, S. G. T. 2, June 24, 1910.  
 k. Dis. No. 130, shoulder, S2-45, Aug. 4, 1909.  
 l. Dis. No. 488, mouth, S8-810 b, Sept. 1, 1910.  
 m. Dis. No. 400, side, S5 corner, July 21, 1910.  
 n. Dis. No. 800, base, S8 g NE, Sept. 8, 1910.  
 o. Dis. No. 1198, S11 v near Greek Fort Wall, Oct. 18, 1910.  
 p. Reg. No. 2427, S3 d, Oct. 6, 1910. Pl. 73 k 5.

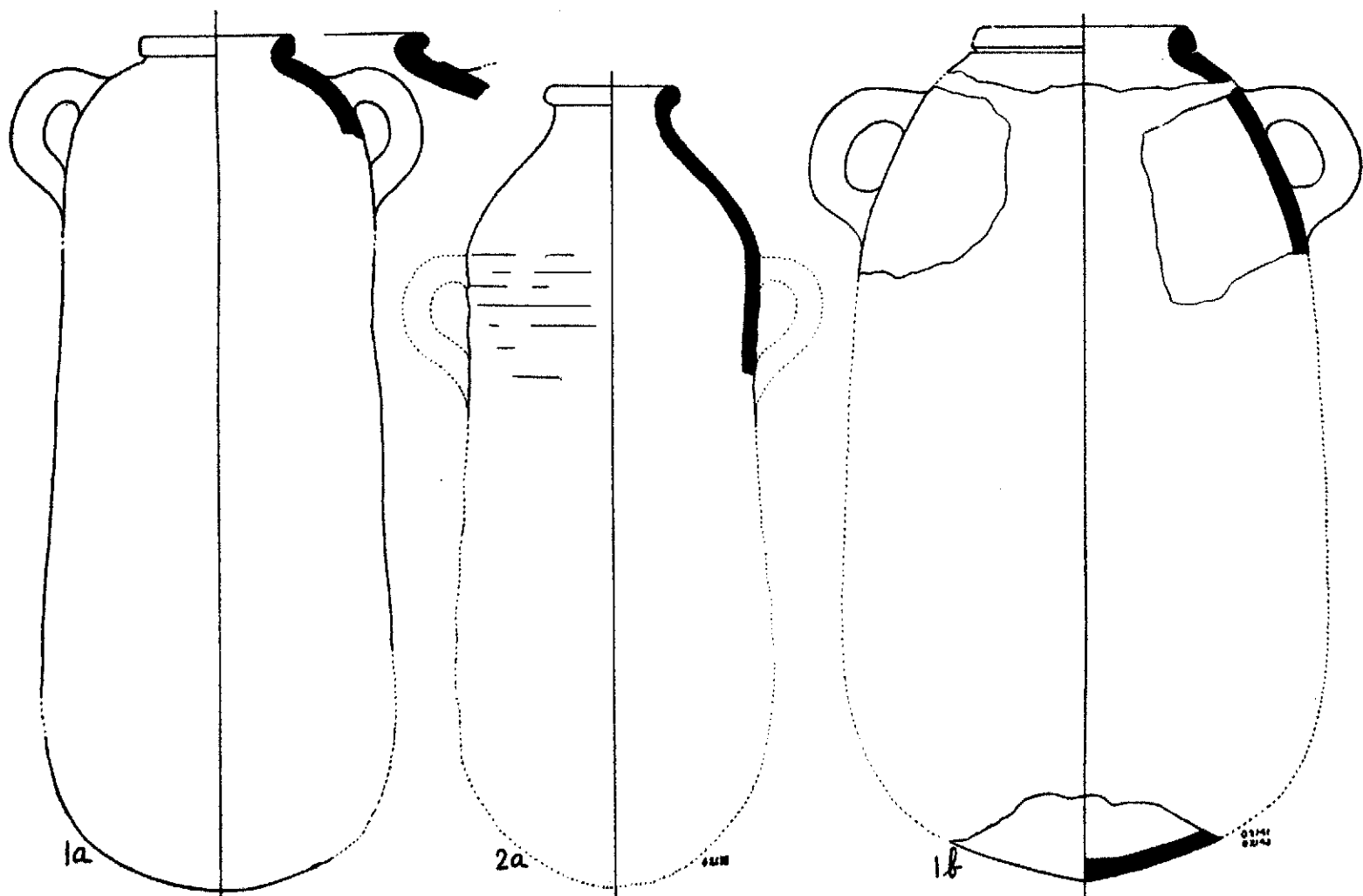


163. Babylonio-Grecian pottery, fine ware and decorated ware. Scale, 1:4.

13. Fragment from the shoulder of a square shouldered jug with a narrow neck, of unpolished buff paste, decorated with an ivy-vine in brown.  
 a. Reg. No. 3451, S4-361, July 12, 1910. See Pl. 72 d 1 and Fig. 173, No. 10.  
 b. Dis. No. 1379, L. T. 1 a W, Aug. 22, 1909. See Fig. 173, No. 15.
14. Fragment of a similar jug, decorated with tongue and dot pattern in red.  
 Dis. No. 454, S6 a, July 27, 1910. See Fig. 173, No. 14.
15. Fragment of the rim of a flaring bowl of fine brown paste, with a floral pattern in black.  
 a. Reg. No. 2500, S3 a W, Oct. 11, 1909. See Pl. 73 d 1.



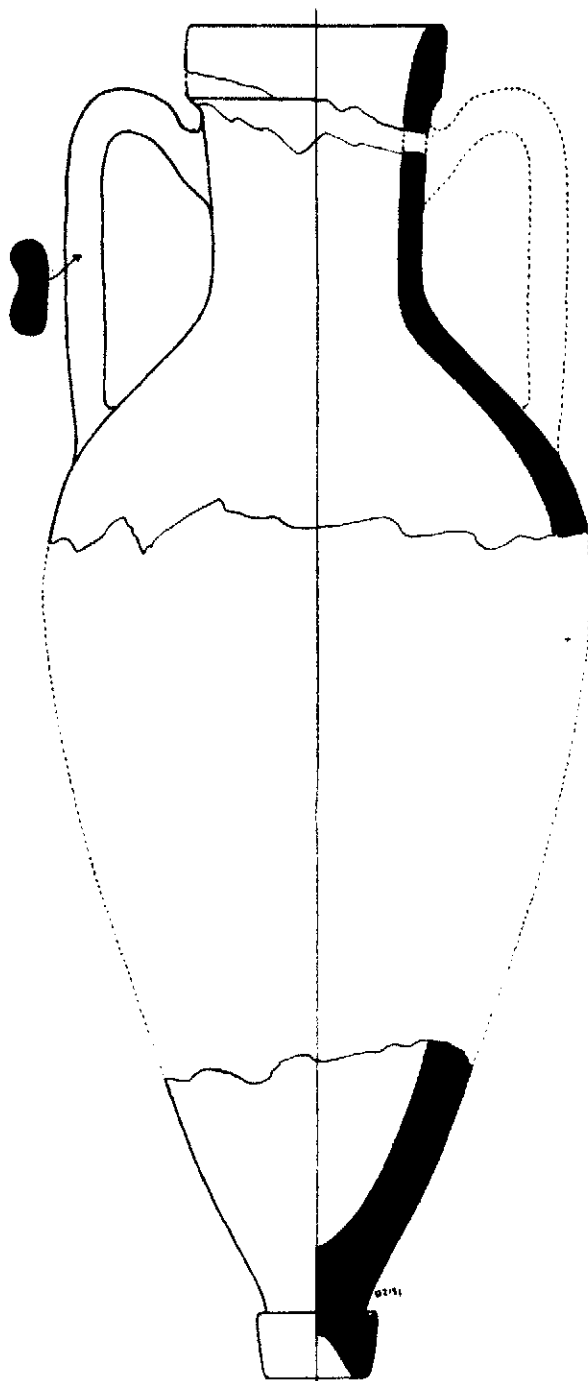
164. Greek white-ground lekythi. Scale, 1:2.



165. Water jars from cistern 7 in strip 1. Scale, 1:4.

## IV. Pottery of cistern 7 in strip 1.

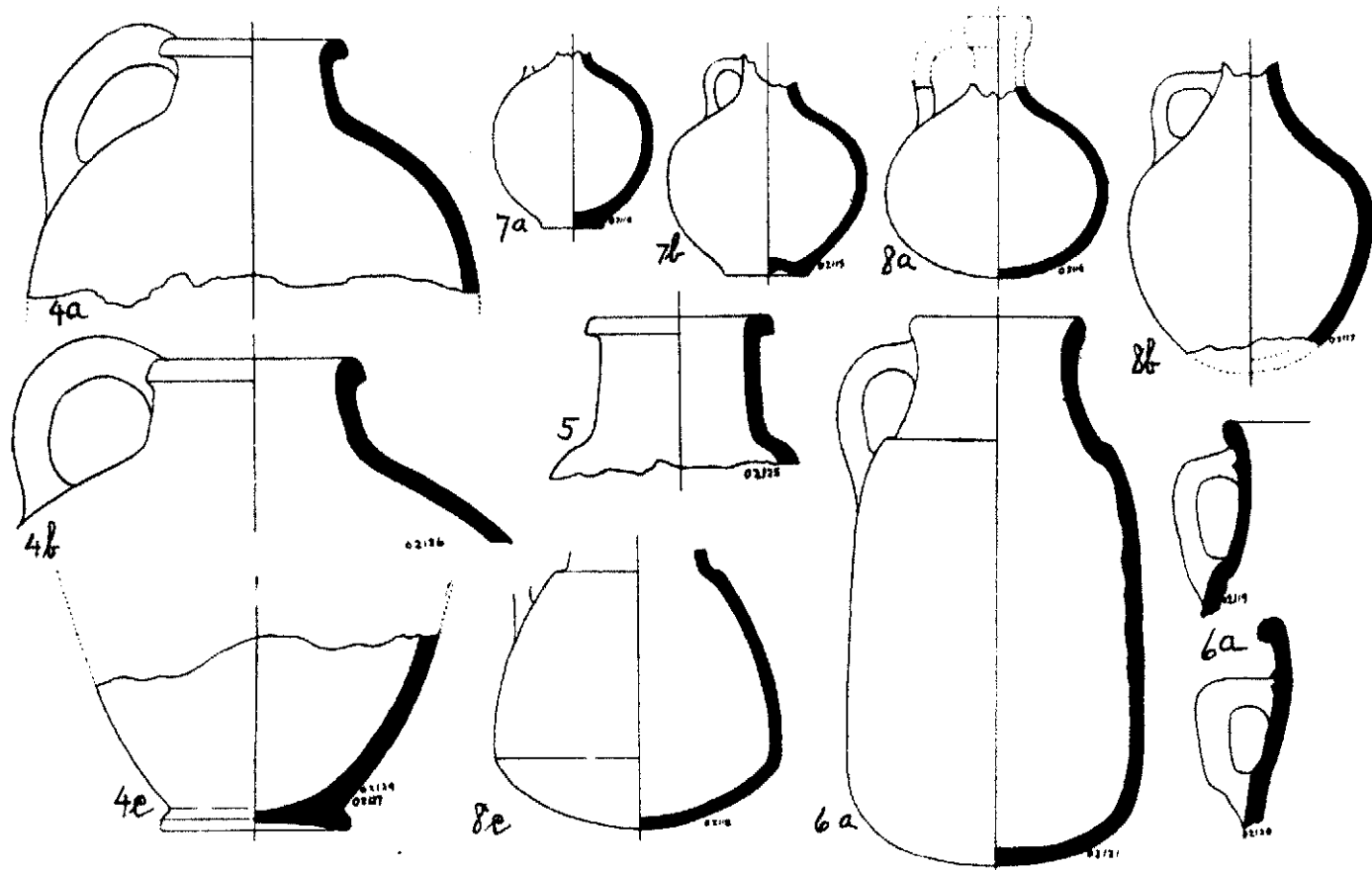
1. Tall two-handled jars. Gray ware (air holes) burning red or drab on the *smoothed* surface, flat handles. Cf. Hellenistic Pottery, p. 299, C I 1 a.
  - a. Dis. No. 2128, a number of fragments. See Pl. 65 a.
  - b. Dis. Nos. 2139-2143, and a number of fragments.



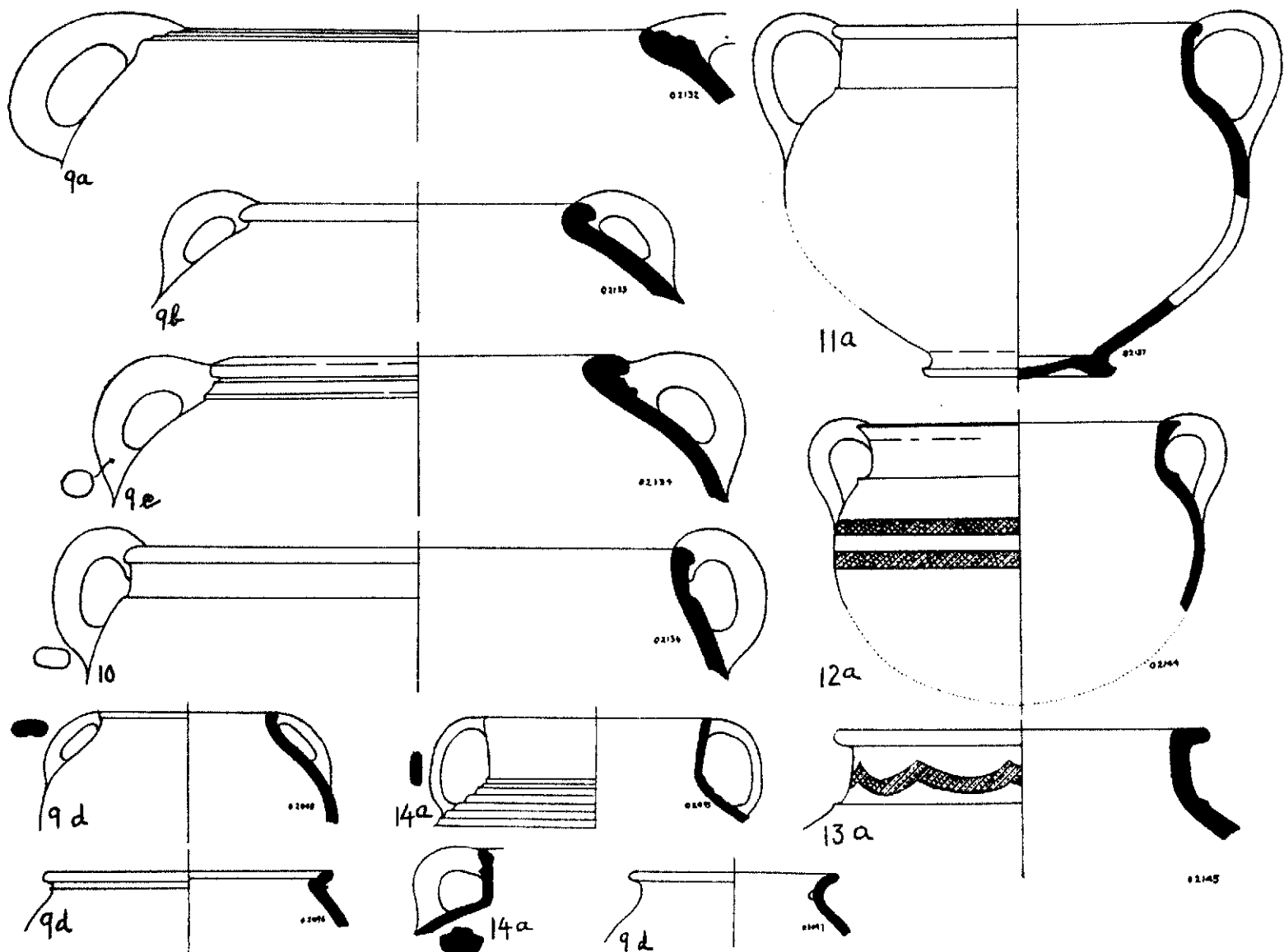
166. Amphora from cistern 7, strip 1. Scale, 1:4.

2. Tall jar with square shoulder. Same ware as 1.
  - a. Dis. No. 2138. See Pl. 65 b 1.
3. Two-handled jar (amphora). Fine reddish-brown ware (inferior to Rhodian).
  - a. Dis. No. 2130, several unconnected fragments. Fig. 166.

4. Short-necked pitcher, disc base (?), drab or gray ware, reddish when hard burnt, greenish when soft burnt.
  - a. Dis. No. 2123-2127, many fragments. See Pl. 65 c.
5. Pitcher (without handle?), necks only, same ware as 4.
  - a. Dis. No. 2125, several fragments. See Pl. 65 b 2-5.
6. One-handled jugs, round bottom. Same ware as 4.
  - a. Dis. No. 2119-2122. See Pl. 65 d.
7. Bulging narrow-necked jugs, with one handle, flat or concave bottom. Fine red ware.
  - a. Dis. No. 2114. See Pl. 65 e.
  - b. Dis. No. 2115. See Pl. 65 e.
8. Bulging narrow-necked jugs, with one handle, round bottom. Fine red or drab ware.
  - a. Dis. No. 2116. See Pl. 65 e.
  - b. Dis. No. 2117. See Pl. 65 e.
  - c. Dis. No. 2118. See Pl. 65 e.
9. Wide-mouthed pot with two loop-handles. Hard coarse gray or drab ware, burning reddish or drab on surface.
  - a. Dis. No. 2132, diam. of mouth 35 cm. See Pl. 65 f.
  - b. Dis. No. 2133, diam. of mouth 22 cm.
  - c. Dis. No. 2134, diam. of mouth 26 cm.
  - d. Dis. Nos. 2097, 2098, smaller jars of same type.
10. Wide-mouthed pot, short neck, two handles. Same ware as 9.
  - a. Dis. No. 2136.
11. Wide-mouthed pot, like 10, but longer neck, rim-base.
  - a. Dis. No. 2137.
12. Wide-mouthed pot, similar to 11. Decorated with brown-red bands.
  - a. Dis. No. 2144, other fragments.
13. Wide-mouthed pot, like 11. Decorated with wavy band on neck.
  - a. Dis. No. 2145.
14. Wide-mouthed pot, like 11, but thinner, lighter ware.
  - a. Dis. No. 2095.
15. Wide bowl with ring-foot. Drab ware, red or greenish-drab surface.
  - a. Dis. Nos. 2100, 2101. See Pl. 65 g.
16. Wide bowl with ring-foot. Light red ware.
  - a. Dis. No. 2102.

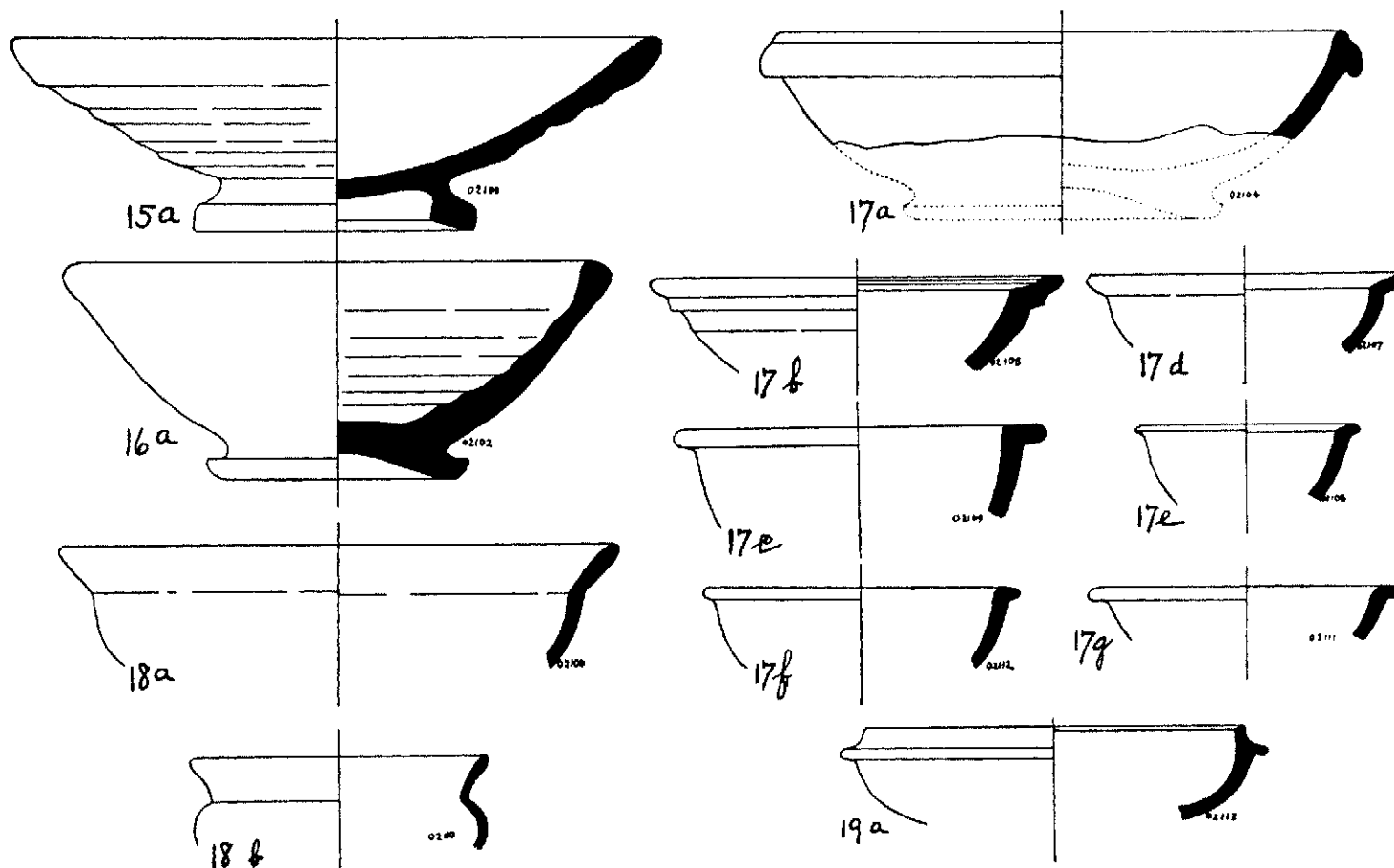


167. Pitchers and jugs from cistern 7, strip 1. Scale, 1:4.



168. Cooking pots from cistern 7, strip 1. Scale, 1:4.

17. Bowl rims. See Pl. 65 h.  
 a. Red ware, Dis. No. 2104.  
 b. Drab ware, Dis. No. 2105.  
 c. Red ware, Dis. No. 2109.  
 d. Brown ware, Dis. No. 2107.  
 e. Drab ware, Dis. No. 2108.  
 f. Drab ware, Dis. No. 2112.  
 g. Red ware, Dis. No. 2111.
18. Bowl rims, recurved. See Pl. 65 h.  
 a. Brown ware, Dis. No. 2106.  
 b. Brown ware, Dis. No. 2110.
19. Bowl with projecting rim. Red ware, black core, red wash, pebble-burnished. See Pl. 65 h.  
 a. Dis. No. 2113.
20. Neck of jar. Red ware, gray core, red wash, pebble-burnish.  
 a. Dis. No. 2149 a. See Fig. 171, No. 20.
- c. Dis. No. 2154.  
 d. Dis. No. 2158.  
 e. Dis. No. 2155.  
 f. Dis. No. 2156.  
 g. Dis. No. 2159.
21. Various bases of jugs.  
 a. Dis. No. 2153.  
 b. Dis. No. 2157.
22. Saucer lamp. Red or brown ware.  
 a. b. Dis. Nos. 2163, 2164. See Pl. 66 e.
23. Deep closed lamp, long spout. Red paste, lustrous black glaze.  
 a. Dis. No. 2165. See Pl. 66 e.
24. Similar to 23. Drab, black glaze. See Pl. 66 e.
25. Fragment of red-figured ware. Similar to Pl. 71 h 7.

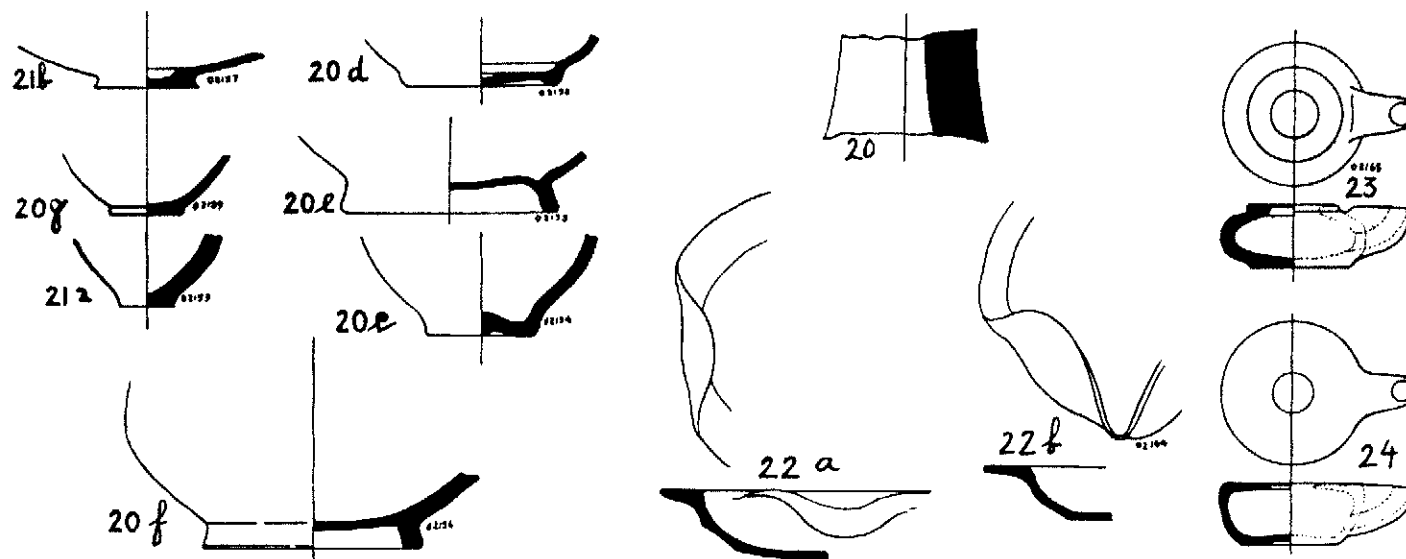


169. Bowls from cistern 7, strip 1. Scale, 1:4.

#### V. Black-Glazed Pottery.

The beautiful black-glazed red pottery of Greece was extremely common all over the site, but along with it were many similar wares of inferior fabric. The finest examples are of a hard, very fine-grained, light-red paste with a lustrous black slip. In some few cases where bands are left not covered by the black glaze, the surface of the ware is the smooth light reddish-brown of the red-figured ware. The second quality of ware is of fine, soft, gray paste with a lustrous or semi-lustrous black slip. The third quality is of fine, hard, red paste, but lacks the character and the beautiful surface of the first quality. The glaze is poor, usually dull, varying from black to reddish-brown, often mottled. So far as one can judge from the insufficiently dated material, the first quality is the earliest and the third quality the latest,

while the second quality is partly contemporaneous with both the other two. In time they cover the later Babylonio-Grecian period and the Hellenistic period down to about 150 B.C. From about 150 B.C. the red-glazed wares are predominant.

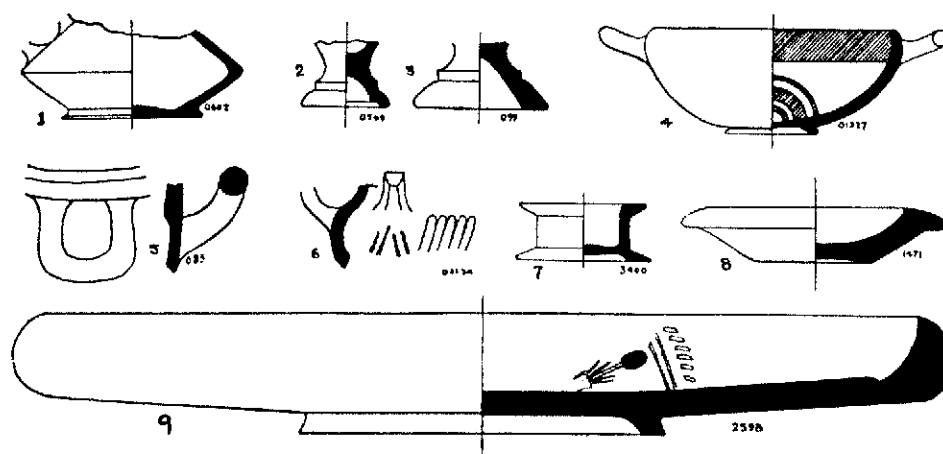


170. Bases of jugs from cistern 7, strip 1.  
Scale, 1:4.

171. Lamps, etc., from cistern 7, strip 1.  
Scale, 1:4.

It was the introduction of the common Greek pottery, serviceable, beautiful, and no doubt relatively cheap, which seems to have completely changed the character of the products of the local potteries. The material of which the local pots are henceforth made does not seem to be essentially different from that used before, but it is better washed and better mixed to a much finer-grained stuff. Needless to say, there must have been efforts at imitation of the Greek pottery, perhaps to be found among the black-glazed gray wares. Certainly the forms of all the better vessels were affected.

a. *Red paste, lustrous black glaze.*



172. Black-glazed vessels, red paste (Nos. 1-6), gray paste (Nos. 7-9).  
Scale, 1:4.

1. Lamp, see p. 317, Lamps A I, and Fig. 171, No. 23.
2. Small lamp-like vase with loop-handle. Fine red paste, lustrous black glaze.
  - a. Dis. No. 602, S8-818, Sept. 15, 1910. See Fig. 172, No. 1.
3. Hollow bowl with two horizontal loop-handles just below rim, and ring base. Same ware.
  - a. Dis. No. 83, S2 cist. 13, 1909. See Fig. 172, No. 5.
  - b. Dis. No. 1327, H. S. 1. See Fig. 172, No. 4.
4. Molded base. Fine, light-red paste, black-

glazed, with black-glazed rings inside hollow base. Wheel-turned.

- a. Dis. No. 156, S2 II 70 E, Oct. 1, 1910.
- b. Dis. No. 233, S3 between Israelite 305 and Greek 314, Oct. 6, 1909.
- c. Dis. No. 260, S3 between Israelite 305 and Greek 314, Oct. 7, 1909.
- d. Dis. No. 351, S3-307, Oct. 6, 1909.
- e. Dis. No. 509, S7-751, Sept. 6, 1910. See Fig. 172, No. 2.
- f. Dis. No. 666, S8-1001 S, Sept. 15, 1910.
- g. Dis. No. 1017, S10 d, Sept. 28, 1910.
- h. Dis. No. 99, S2 III 47, Aug. 21, 1909. See Fig. 172, No. 3, and Pl. 71 b.

5. Fragments of reeded body with handle. The reeding seems to be impressed on a wheel-turned body. These may possibly belong to No. 4.
  - a. Reg. No. 1470, H. S. 1, June 15, 1909. See Pl. 72 f 2.
  - b. Reg. No. 3103, S. G. T. 3, June 26, 1910.
  - c. Dis. No. 127, S2-45 sub, Aug. 4, 1909.
  - d. Dis. No. 2234, S2 north of southern wall of temple, upper debris, July 26, 1909. See Pl. 68 j and Fig. 172, No. 6.
6. Edge of a wide, open vase with rim and horizontal loop-handles.
  - a. Reg. No. 2970, S. G. T. 4, June 23, 1910.
7. Flat plate, fine red paste, lustrous black glaze, ring-base, decorated inside with incised lines, stamped palmettes, rosettes, etc., within milled circles.
  - a. Dis. No. 2087, Trench A, July 19, 1908. See Fig. 174, No. 1. Fragment.
  - b. Dis. No. 757, S8 d deep, beside Greek Fort Wall, Sept. 22, 1910. See Fig. 174, No. 2. Fragment.
8. Plate with central cup, decorated by leaving bands uncolored. Ware as in No. 7.
  - a. Dis. No. 640, S8-861, Sept. 20, 1910. See Fig. 174, No. 3. Fragment.
9. Hollow plate with ring-base, of same ware as No. 7 and with same decorations.
  - a. Reg. No. 1462, S1, south of bath, deep, June 10, 1909. See Fig. 174, Nos. 4, 17. Fragments.
  - b. Dis. No. 372, S3-314, Oct. 8, 1909. See Fig. 174, Nos. 5, 18. Fragment.
  - c. Dis. No. 226, S3 c W, Oct. 6, 1909. See Fig. 174, No. 6. Fragment.
10. Small hollow bowl with ring-base, of same ware as No. 7, and with same decorations.
  - a. Reg. No. 1445, S1 N, June 3, 1909. See Fig. 174, No. 7, and Pl. 72 f 4.
  - b. Dis. No. 1430, L. T. 2 b, Sept. 4, 1909. Fragment.
  - c. Dis. No. 101, S2 III 47 sub, Aug. 21, 1909. Fragment.
11. Fragments of the bases of plates or bowls like Nos. 7, 9, or 10. Same ware and decoration.
  - a. Reg. No. 2794, Gateway, SW Tower below Roman level, Aug. 17, 1909. Scratched in base: A or Δ.
  - b. Reg. No. 2892, S. G. T. 2, June 21, 1910. See Fig. 174, No. 19.
  - c. Dis. No. 753, S8 d, Sept. 16, 1910. See Fig. 174, No. 20.
  - d. Dis. No. 22, S1 S, June 20, 1909.
  - e. Dis. No. 128, S2 III 45 sub, Aug. 4, 1909. See Fig. 174, No. 24.
  - f. Dis. No. 393, S4-310 under Roman wall, Oct. 19, 1909. See Fig. 174, No. 22.
  - g. Dis. No. 1417, L. T. 1 b cave 4, Aug. 30, 1909. See Fig. 174, No. 25.
  - h. Dis. No. 1567, Cliff Trench, Aug. 4, 1909. See Fig. 174, No. 26.

*β. Gray ware, black glaze.*

1. Pyxis. Lustrous black glaze.
  - a. Reg. No. 3400, S5 h w (with early potsherds). See Fig. 172, No. 7.
2. Edge of bottom of a jar, pattern of vertical incised lines. Lustrous black glaze.
  - a. Reg. No. 3053, S. G. T. 3, June 25, 1910.
3. Small saucer, like alabaster saucers in form (see Fig. 206, No. 7 c). Dull black.
  - a. Reg. No. 1471, H. S. stone-thieves' hole, June 15, 1909. See Fig. 172, No. 8.
4. Bowl of greenish-gray paste, semi-lustrous black glaze.
  - a. Reg. No. 3369, S5 b, July 7, 1910.
5. Plate, heavy. Impressed central pattern and milled circles. Semi-lustrous black glaze.
  - a. Reg. No. 2598, S4 b, upper debris, Oct. 22, 1909. See Figs. 172, No. 9 and 174, No. 27.
6. Rim of flaring plate, molded egg-and-dart border with rope border below it. Dull black.
  - a. Reg. No. 2582, S4 g S, Oct. 20, 1909.
7. See *Lamps*, p. 317 ff.

*γ. Black-glazed pottery with painted decorations.*

The decorated black-glazed pottery is of both gray and red paste. The glaze is at the best not brilliant, and in the poorer examples a dull black or brown. The decoration usually takes the form of ivy vines with the stem incised, and stem, leaves, and fruit painted in thick opaque white, yellow, or pink colors. There are a number of forms as shown below.

1. Small jug with handle (or handles), buff ware, lustrous black slip. Ivy vine decoration, paint rubbed off.
  - a. Reg. No. 3029, S. G. T. 1, June 24, 1910. See Fig. 173, No. 9.
- b. Dis. No. 201, S3 b NE deep, Oct. 5, 1909. Fragment.
2. Minute vase, of red paste.
  - a. Dis. No. 2096, Trench G, April 25, 1908. See Fig. 173, No. 11. Fragment.



## 3. Krater-like vessels.

## (1) Of fine red paste:

- a. Dis. No. 202, S3 b NE deep, Oct. 5, 1909. See Fig. 173, No. 4. Fragment.  
b. Dis. No. 567, S8-803, Sept. 15, 1910. See Fig. 173, No. 8. Fragment.

## (2) Of fine gray paste:

- c. Reg. No. 4455, S7-751, Sept. 10, 1910. See Fig. 173, No. 3. Fragment.  
d. Dis. No. 2094, S8-882, Sept. 27, 1910. See Fig. 173, No. 17. Reconstructed from two fragments which did not join.  
e. Dis. No. 883, S9 beside Greek Fort Wall, deep, Sept. 19, 1909. See Fig. 173, No. 18. Reconstructed from one fragment.

- b. Dis. No. 788, S8 NW corner, deep, Oct. 1, 1910. Fragment.

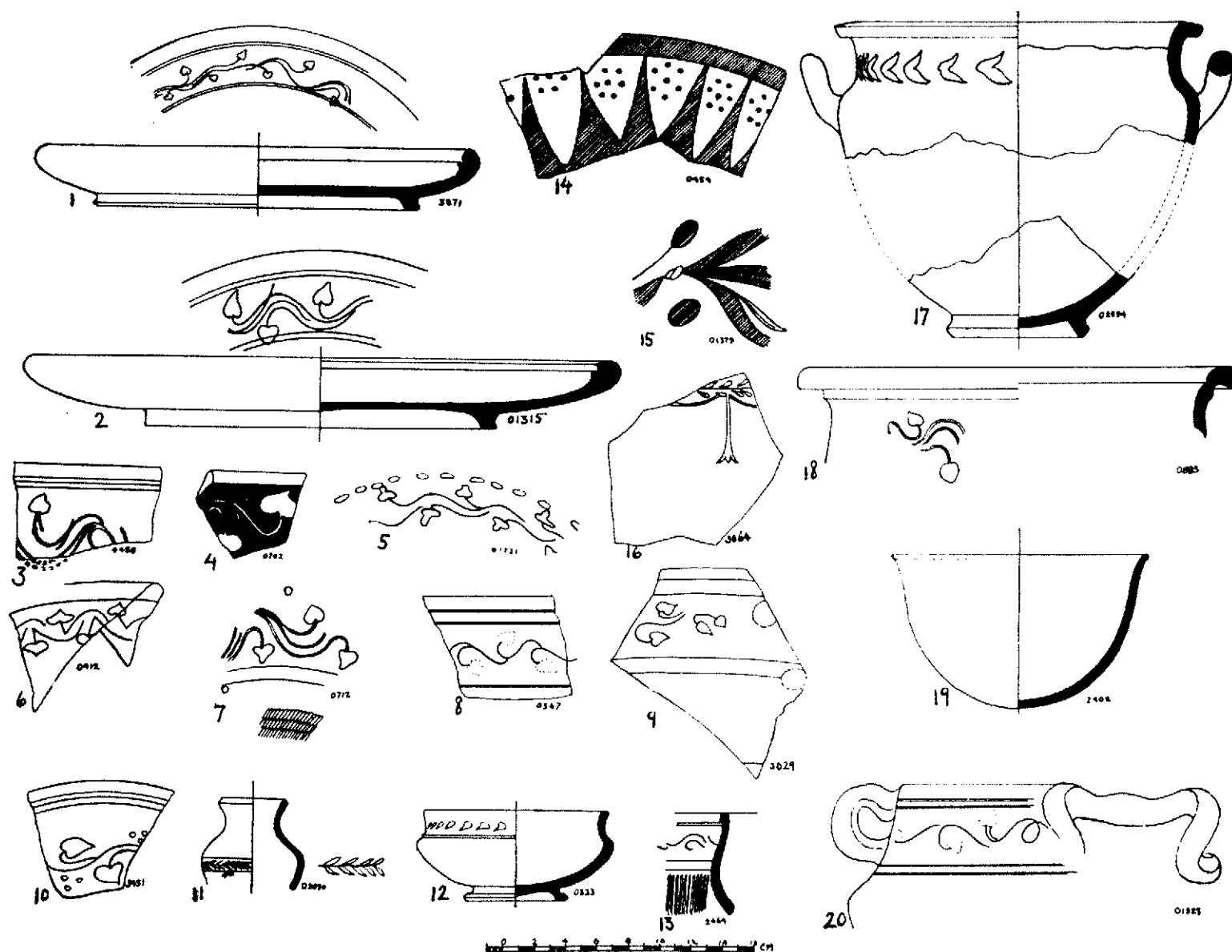
6. Bowl with recurved rim and molded foot, of red paste, brown glaze. Perhaps with handles.

- a. Dis. No. 323, S3 street cistern, Oct. 22, 1909. See Fig. 173, No. 12 (reconstructed from two small fragments).

7. Plate, with molded incurving rim and ring-base. Ivy vine inside rim. In centre, milled rings and impressed pattern like the black-glazed plates (see Fig. 174).

## (1) Red paste, white paint.

- a. Reg. No. 2501-2502, S3-320, Oct. 11, 1909. Semi-lustrous.



173. Decorated black-glazed and other pottery. Scale, 1:2, except Nos. 1, 2, 11-13, 17-20, which are 1:4.

4. Large bowl with horizontal loop-handles, of red paste.

- a. Dis. No. 1925, Trench G, 1909. See Fig. 173, No. 20. Fragment.

5. Bowl, with reeded body. Light red paste, brown glaze.

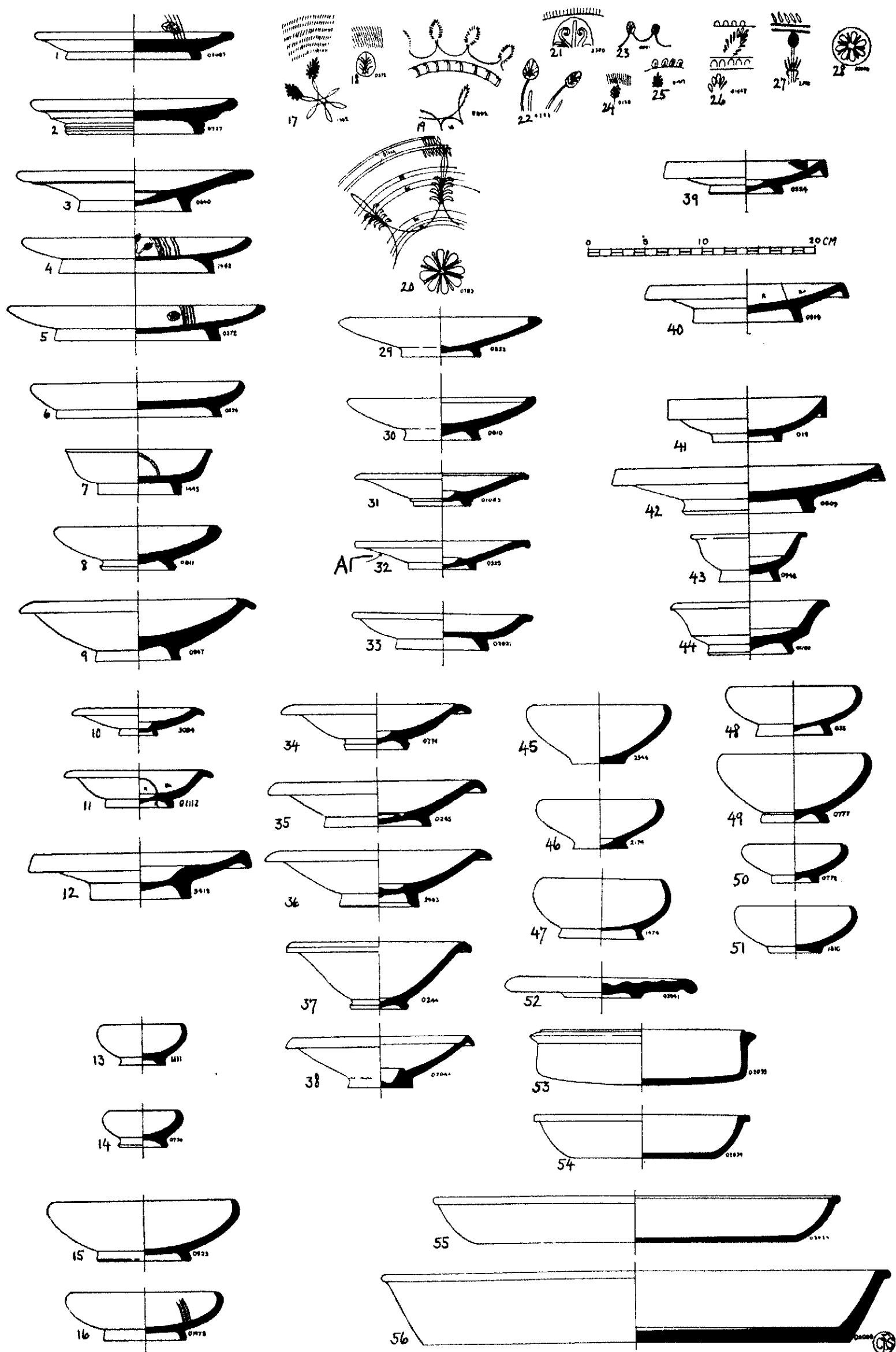
- a. Reg. No. 2464, S3 street cistern, Oct. 22, 1909. See Fig. 173, No. 13. Fine gray paste, dull black glaze.

- b. Dis. No. 188, S3 a, Oct. 6, 1909. White paint rubbed off.

- c. Dis. No. 328, S3 street cistern, Oct. 18, 1909.

- d. Dis. No. 520, S7-755, Sept. 12, 1910. Milled circles and stamped ornament in centre.

- e. Dis. No. 712, S8 d, Sept. 14, 1910. Two holes for mending. See Fig. 173, No. 7. Fragment.

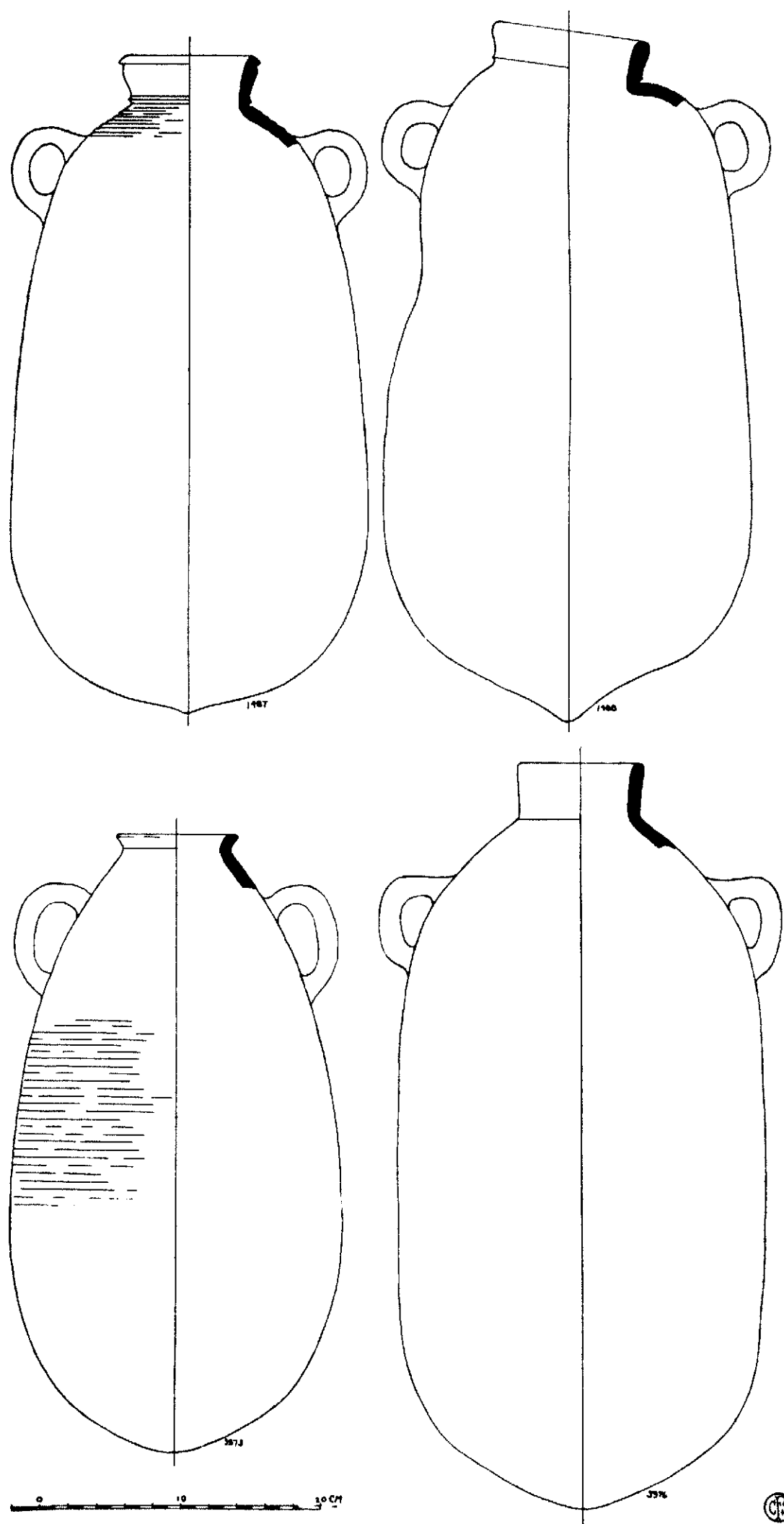


174. Dishes of red paste: black-glazed (Nos. 1-7), inferior black-glazed (Nos. 8-16 and 44), poor red or brown-glazed (Nos. 20-43 and 45-50), red wash (Nos. 51-56), and interior decoration (Nos. 17-28). Scale, 1:4.

- (2) Red paste, yellowish paint.
  - f. Dis. No. 412, S5 e, June 30, 1910. Semi-lustrous. See Fig. 173, No. 6. Fragment.
- (3) Red paste, thick pinkish paint.
  - g. Dis. No. 1203, S11 z, deep, Oct. 19, 1910. Semi-lustrous.
  - h. Dis. No. 446, L. T. E., July 14, 1910.
- (4) Gray paste, white paint.
  - i. Reg. No. 2434, S3 between street walls, Oct. 6, 1909. See Pl. 73 k 7.
  - j. Reg. No. 3871, S6 g, Aug. 13, 1910. See Fig. 173, No. 1.
  - k. Dis. No. 1315, H. S. 2, July 19, 1909. See Fig. 173, No. 2 (reconstructed from a fragment).
  - l. Dis. No. 1221, S11-11 sub, Oct. 21, 1910. See Fig. 173, No. 5 (fragment).
  - m. Dis. No. 2233, S2 south of S wall of temple, July 26, 1909.
- 8. Fragment from edge of deep bowl. Light red paste, black glaze. Pattern of leaves and lines on outside of rim, incised lines, thick pinkish paint.
  - a. Dis. No. 1095, S11-1 S, deep, Oct. 14, 1910.
- 9. Jug (?). Fragment of body with handle. Light red paste, semi-lustrous black glaze. Decoration (flowers, lines, and dots) in pink paint.
  - a. Dis. No. 229, S3 d, Sept. 23, 1909.
- 10. Fragment of bowl or plate. Light red paste, black glaze. Spray of leaves, in pink paint, inside.
  - a. Dis. No. 615, S8-817, Sept. 17, 1910.
- 11. Fragment. Light red paste, lustrous black slip. Floral decoration in brown paint.
  - a. Reg. No. 3064, N. G. T. 11, June 25, 1910. See Fig. 173, No. 16.

§. *Turned vessels of red paste with dull black glaze, sometimes burnt to a brown or red, or unevenly burnt, partly black and partly brown or red.*

- 1. Rimmed shallow bowl with ring-base.
  - a. Dis. No. 811 (black), S9-901 c sub, Oct. 10, 1910. See Fig. 174, No. 8.
  - b. Dis. No. 810 (red), S9-901 c sub, Oct. 10, 1910. See Fig. 174, No. 30.
  - c. Dis. No. 522 (brown), S7-755, Sept. 12, 1910. See Fig. 174, No. 29.
- 2. Shallow bowl with broad flat rim marked with lines, central cup, and ring-base.
  - a. Dis. No. 1053 (red, partly brown), S10 d, Oct. 13, 1910. See Fig. 174, No. 31.
  - b. Dis. No. 325 (red, AF scratched on bottom), S3 street cistern, Oct. 22, 1909. See Fig. 174, No. 32.
- 3. Shallow bowl with broad flat rim and ring-base.
  - a. Dis. No. 2021 (red-brown mottled), Trench F, May 25, 1908. See Fig. 174, No. 33.
- 4. Bowl with broad flat rim turned down, central cup, ring-base.
  - a. Reg. No. 2463 (poor red, bottom partly bare of color), S3 street cistern, Oct. 17, 1909. See Fig. 174, No. 36, and Pl. 74 e.
  - b. Reg. No. 3084 (dull black), S2-7, June 26, 1910. See Fig. 174, No. 10.
  - c. Reg. No. 3250 (dull black, in base A-ME-), S5 f, July 2, 1910. See Pl. 74 a.
  - d. Dis. No. 1112 (red-black), S11-1 N, deep, Oct. 22, 1910. See Fig. 174, No. 11.
  - e. Dis. No. 179 (black), S3 a, Sept. 27, 1909.
  - f. Dis. No. 776 (red), S8, Oct. 6, 1910. See Fig. 174, No. 34.
  - g. Dis. No. 2044 (red-brown) Trench G, July 18, 1908. See Fig. 174, No. 38.
  - h. Dis. No. 244 (red, bottom bare), S3 f, Sept. 30, 1909. See Fig. 174, No. 37.
  - i. Dis. No. 265 (red, poor glaze), S3 b, between street walls, Oct. 6, 1909. See Fig. 174, No. 35.
- 5. Shallow bowl, like No. 4 but without central cup.
  - a. Dis. No. 754 (black), S8 d S, Sept. 16, 1910.
  - b. Dis. No. 758 (black), S8 d deep, Sept. 22, 1910.
  - c. Dis. No. 914 (red-brown), S10 a, Sept. 29, 1910. See Fig. 174, No. 40.
  - d. Dis. No. 947 (black), S10, Oct. 12, 1910. See Fig. 174, No. 9.
  - e. Dis. No. 1113 (brown), S11-1 N, deep, Oct. 22, 1910.
  - f. Dis. No. 809 (dark red), S9-1001, Oct. 10, 1910. See Fig. 174, No. 42.
- 6. Shallow bowl with broad vertical band around rim, central cup, and ring-base; hard fine red ware, poor red or black glaze.
  - a. Reg. No. 3412 (black), S5 h W, July 9, 1910. See Fig. 174, No. 12.
  - b. Dis. No. 524 (red-brown), S7-755 N, Sept. 14, 1910. See Fig. 174, No. 39.
- 7. Same as 6, without central cup.
  - a. Dis. No. 19 (red), S1 under basin level, June 9, 1909. See Fig. 174, No. 41.
- 8. Bowl with slightly flaring rim and ring-base, fine hard red or buff ware, with imperfect red or black-brown glaze or wash.
  - a. Reg. No. 2560, S3 street cistern, Oct. 18, 1909.
  - b. Dis. No. 948, S10, Oct. 12, 1910. See Pl. 74 j 1 and Fig. 174, No. 43.
  - c. Dis. No. 944, S10, Oct. 11, 1910.
  - d. Dis. No. 1180, S11 v, Oct. 17, 1910. See Pl. 74 j 2 and Fig. 174, No. 44.
  - e. Dis. No. 262, S3 b under street Lambda, Oct. 6, 1909.
  - f. Dis. No. 17, S1 III under basin level, June 8, 1909.
  - g. Dis. No. 64, S2 between two walls.



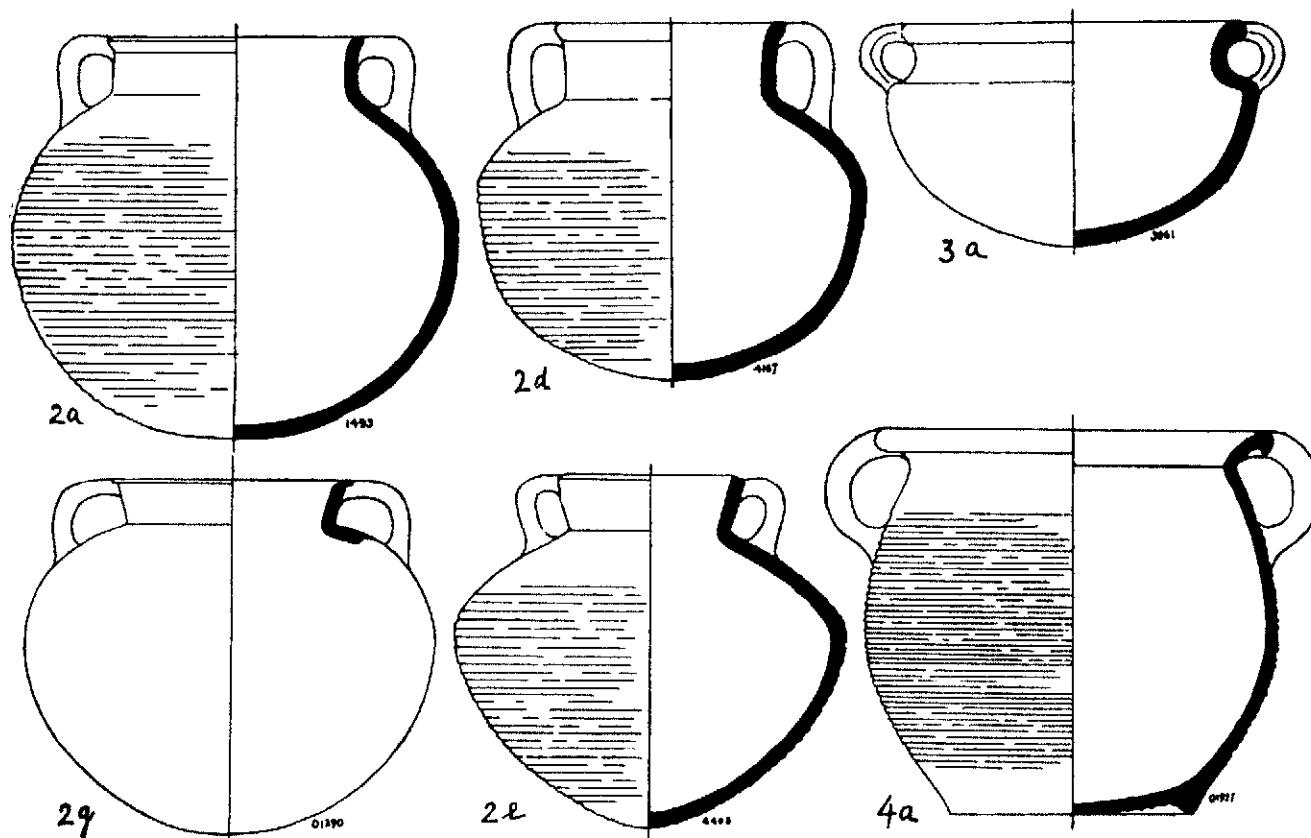
175. Hellenistic water jars. Scale 1:4.

9. Bowl with round sides, contracted rim, ring-base; fine hard red or buff ware; dull black, brown or red glaze inside and outside, except on bottom.
  - a. Reg. No. 1474, H. S., June 17, 1909. See Fig. 174, No. 47.
  - b. Reg. No. 2857, S. G. T. 1, June 18, 1910.
  - c. Reg. No. 3369, S5 b, July 7, 1910. Pl. 74 d.
  - d. Dis. No. 523, S7-755, Sept. 12, 1910. See Fig. 174, No. 15.
  - e. Dis. No. 799, S8 c W, Sept. 3, 1910.
  - f. Dis. No. 1478 (milled circle inside), L. T. 5, Sept. 11, 1909. See Pl. 74 b and Fig. 174, No. 16.
  - g. Dis. No. 1541, L. T. 5-53-54 cist., Oct. 13, 1909.
  - h. Dis. No. 23, S1 III, June 9, 1909. See Fig. 174, No. 48.
  - i. Dis. No. 777, S8 above Greek Fort Wall, Oct. 6, 1910. See Fig. 174, No. 49.
  - j. Dis. No. 778, S8 d, above Greek Fort Wall, Sept. 20, 1910. See Fig. 174, No. 50.
  - k. Dis. No. 943, S10, Oct. 11, 1910.
  - l. Dis. No. 756, S8 d, deep, beside Greek Fort Wall, Sept. 22, 1910. See Fig. 174, No. 14.
10. Same form as No. 9 with ring-base, black ware, burnished on inside and on upper part of outside.
  - a. Reg. No. 1611, S2-47, Aug. 19, 1909. See Fig. 174, No. 13.
11. Form like 9, with disc base, red slip.
  - a. Reg. No. 2174, S3 b NE, low, Oct. 5, 1909. See Fig. 174, No. 46.
  - b. Reg. No. 2546, S3 corner cistern, Oct. 16, 1909. See Fig. 174, No. 45.

## C. HELLENISTIC POTTERY

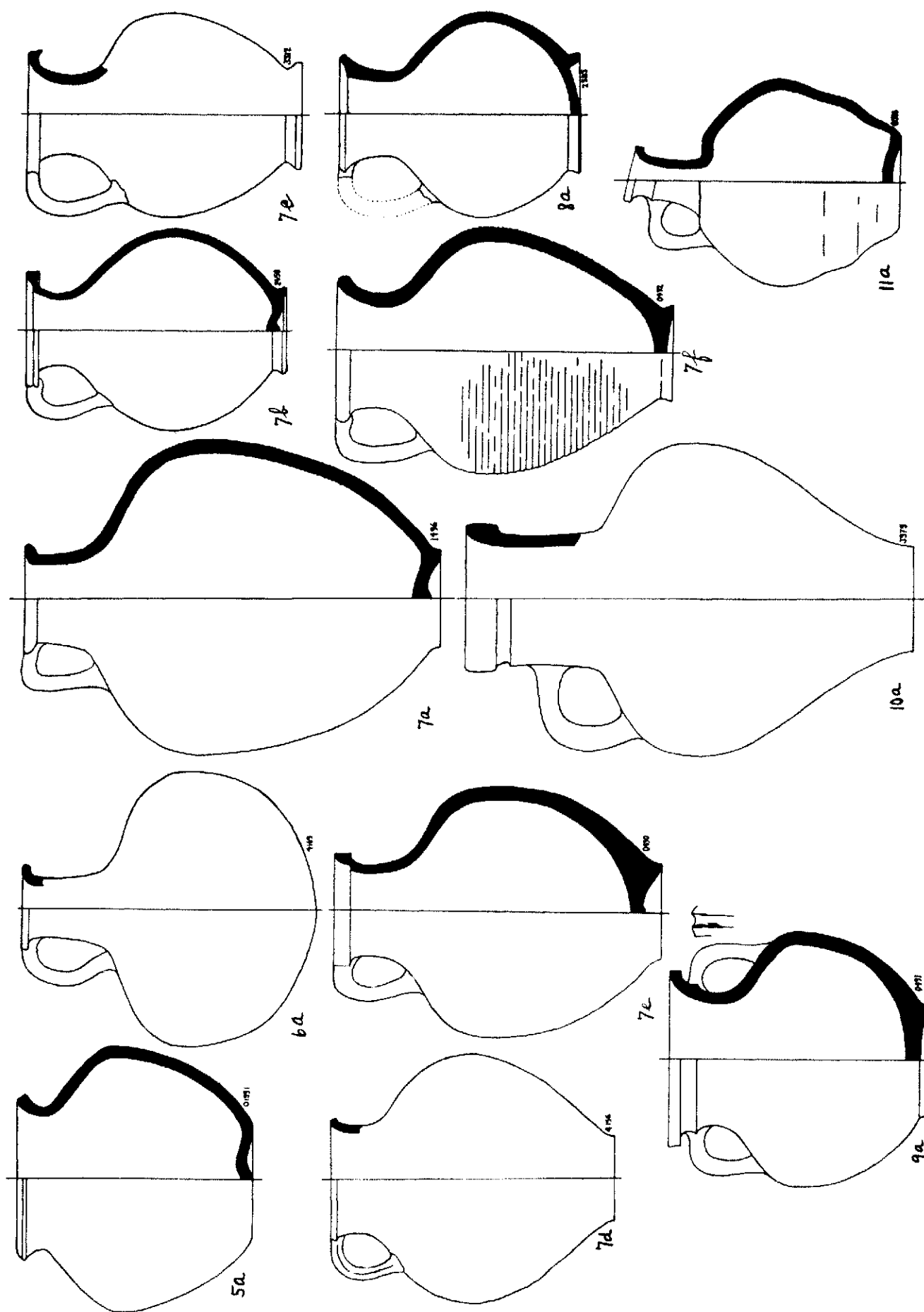
## I. Ordinary pottery.

The poorer black-glazed pottery described above dominates the early part of the Hellenistic period. Later came the red-glazed wares and the molded relief vases. The common pottery presents in the large water jars and cooking pots, and in some of the jugs and pitchers, a continuation of the older pottery in a thinner, harder ware, but the greater part of the small vessels show a predominance of new and graceful forms in a much improved material. The bowls show naturally the same forms as the glazed pottery. The use of rolled and impressed patterns is characteristic. The great improvement introduced by substitution of the pottery mold for the wheel is reflected in the lamps, the relief vases, and perhaps the red-glazed wares.



176. Hellenistic cooking pots, designated by list numbers. Scale, 1:4.

1. Large water jar, thin walled, with two handles, of flinty gray ware with a light surface, wet-smoothed. H., 45-60 cm. See Fig. 175.
  - a. Reg. Nos. 1487-1492, S1 cistern 8, June 21, 1909. See Pl. 68 a.
  - b. Reg. Nos. 3973-8, 3983, S7-365 cistern 1, Aug. 18-19, 1910.
  - c. Dis. No. 142, S2 portico III 63, Sept. 9, 1909.
  - d. Dis. No. 77, S2 middle, July 17, 1909. Fragments of these jars were found in many



177. Hellenistic pitchers, designated by list numbers. Scale, 1:4.

other places, in almost all cisterns. They must have had a wide range; cf. Israelite Pottery I 1-3.

2. Round-bodied pot with wide mouth and two flat handles, of red or brown ware, thin, slightly ribbed, often firestained. H., 17-21 cm.

a. Reg. Nos. 1493-5, S1 cist. 8, June 21, 1909.  
b. Reg. No. 1697, S2 on floor of room 65.  
c. Reg. No. 3982, S7-365 cist. 1, Aug. 19, 1910.  
d. Reg. No. 4157, 4166-7, 4170, S7 cist. 4, Aug. 30, 1910. See Pl. 68 d 2.  
e. Reg. No. 4403, S9 cist. 1, Sept. 6, 1910.  
f. Dis. No. 75, S2 middle, July 17, 1909.  
g. Dis. No. 1390, L. T. 1 c, Sept. 3, 1909.

3. Similar to No. 2, but with a square shoulder.

a. Reg. No. 3861, S7 cist. 2 (stair cistern), Aug. 11, 1910.

c. Reg. No. 3312, S5 f W, July 4, 1910.

d. Reg. No. 4156, S7 cist. 4, Aug. 30, 1910. See Pl. 68 d 1.

e. Dis. No. 490, S7 cist. 3, Sept. 19, 1910.

f. Dis. No. 492, S7 cist. 3, Sept. 19, 1910.

8. Pitcher with one handle and ring-base, of red ware.

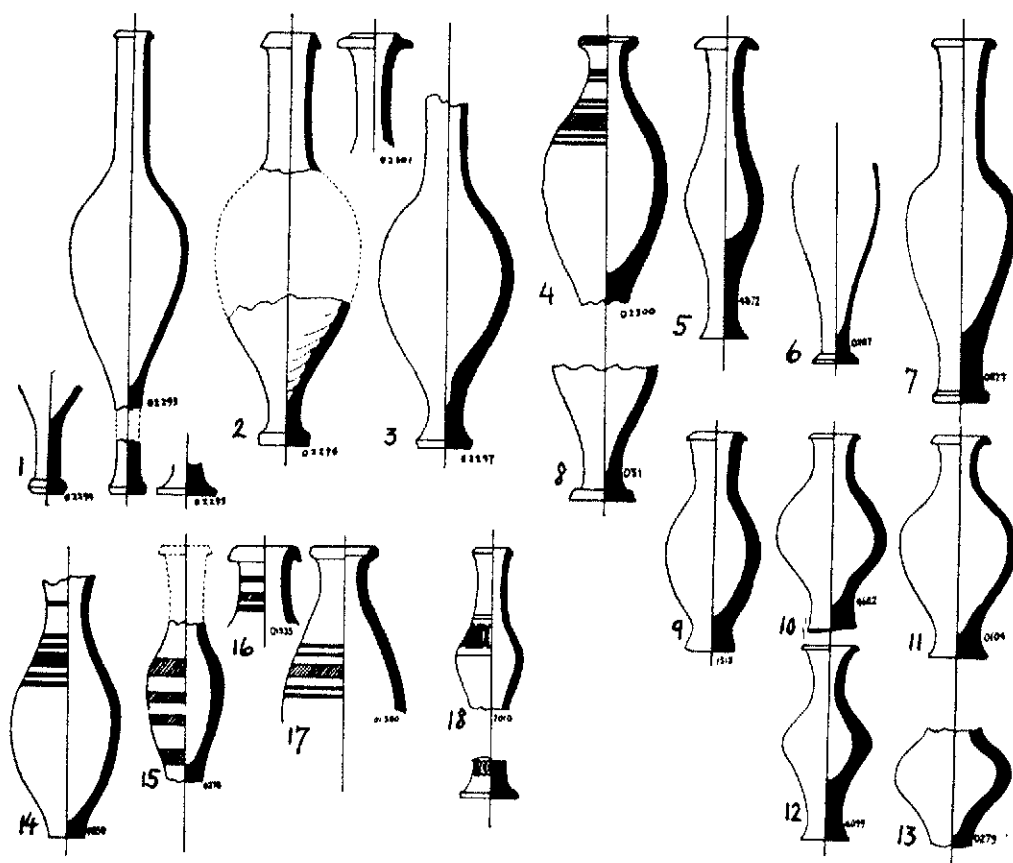
a. Reg. No. 2585, S3 street cistern, Oct. 21, 1909. See Pl. 67 a.

9. Wide-mouthed pot with two neck handles, of red ware.

a. Dis. No. 491, S7 cist. 3, Sept. 9, 1910.

10. Pitcher similar to No. 2 a, but with the handle attached to neck, not to rim. Same ware. H., 32 cm.

a. Reg. No. 3979, S7-365 cist. 1, Aug. 18, 1910.



178. Hellenistic bottles, types 12-14. Scale, 1:4.

4. Wide-mouthed pot, with two handles and ring-base.

a. Dis. No. 1927, Trench F, 1908.

5. Wide-mouthed pot, without handles, of hard drab ware.

a. Dis. No. 1391, L. T. 1 c, Sept. 3, 1909.

6. Round-bodied jug with narrow neck and single handle, of red ware, thin, slightly ribbed like No. 25. H., 21 cm.

a. Reg. No. 4169, S7 cist. 4, Aug. 31, 1910. See Pl. 68 e.

7. Pitcher with ring-base, same ware as Nos. 25 and 27. H., 29-32 cm.

a. Reg. No. 1496, S1 square cistern No. 8, June 21, 1909.  
b. Reg. No. 2458, S2 a W, Oct. 8, 1909.

11. Jug with narrow neck and one neck handle, of smoothed red ware. Misshapen.

a. Dis. No. 316, S3 street cistern, Oct. 22, 1909.

12. Small bottles of fine red or drab ware, smooth surface, both with and without a red wash, varying in size and form from 10 to 20 cm.

a. Reg. No. 1515, H. S. 1, June 22, 1909. See Fig. 178, No. 9.

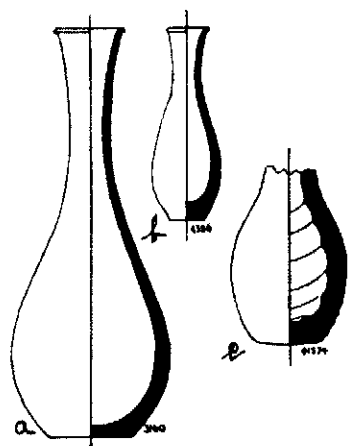
b. Reg. No. 4602, S8-816, Sept. 21, 1910. See Fig. 178, No. 10.

c. Reg. No. 4872 (very slender), S11 z, Oct. 15, 1910. See Pl. 67 g 1 and Fig. 178, No. 5.

d. Reg. No. 4099, L. T. a W, Aug. 17, 1910. See Pl. 67 j 3 and Fig. 178, No. 12.

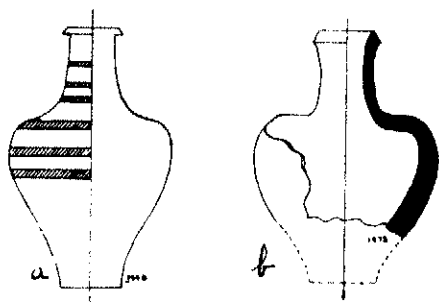
e. Dis. Nos. 2293-2297, vault cist. 2, Aug. 21 to 25, 1909. See Fig. 178, Nos. 1-3.

- f. Dis. Nos. 277, 279, 287, S3 street, Oct. 7-9, 1909. See Fig. 178, Nos. 7, 13, and 6.  
 g. Dis. No. 31, H. S., July 17, 1909. See Fig. 178, No. 8.  
 h. Dis. No. 104, S2 III 59 sub, July 14, 1909. See Fig. 178, No. 11.
13. Small bottle like No. 12, but with a band of ovals in relief around shoulder.  
 a. Reg. No. 2010, L. T. 2 b, Sept. 4, 1909. See Fig. 178, No. 18.
14. Bottle (similar to Nos. 12 and 13), of pink, drab, or yellowish paste, decorated with orange bands around neck and shoulder.  
 a. Reg. No. 4850, S11-23 cistern, Oct. 12, 1910. See Pl. 67 i 2, and Fig. 178, No. 14.  
 b. Dis. No. 278, S3 street, Oct. 8, 1909. See Fig. 178, No. 15.  
 c. Dis. No. 1535, L. T. 53 cistern, Oct. 13, 1909. See Fig. 178, No. 16.  
 d. Dis. No. 1380, L. T. 1, Aug. 25, 1909. See Fig. 178, No. 17.
- a. Reg. No. 3946, Kaid's Land vault, Aug. 17, 1910.  
 b. Reg. No. 1475, H. S., June 12, 1909.
17. Minute jar (napf) of fine red ware, wet-smoothed. H., 3-7 cm.  
 a. Reg. No. 1596, S2-45, Aug. 4, 1909.  
 b. Reg. No. 1960, L. T. 1 c, room 8, Aug. 27, 1909.  
 c. Reg. No. 2410, S3 a, Oct. 1, 1909. See Pl. 68 g 1.  
 d. Reg. No. 2428, S3 b, Oct. 6, 1909. See Pl. 73 k 4.  
 e. Reg. No. 3410, S5 h W, July 9, 1910.  
 f. Reg. No. 4114, S7-712 sub, Aug. 25, 1910.  
 g. Reg. No. 4807, S11-2 below floor, Aug. 10, 1910. Contained fragments of gold. See Pl. 67 g 2.
18. Little jars with mouth compressed to form spout, of fine red ware. H., 6 cm.  
 a. Reg. No. 1472, H. S. 1, June 15, 1909.



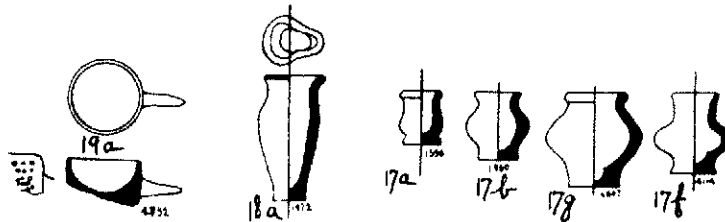
179. Hellenistic bottles, type 15. Scale, 1:4.

15. Bottle with slightly bulging base, of same ware.  
 a. Reg. No. 3160, N. G. T. 4, June 29, 1910. See Pl. 67 l.  
 b. Reg. No. 4386, Samarra c, Sept. 6, 1910. See Pl. 67 j 2.  
 c. Dis. No. 1574, Cl. T., Aug. 14, 1909.



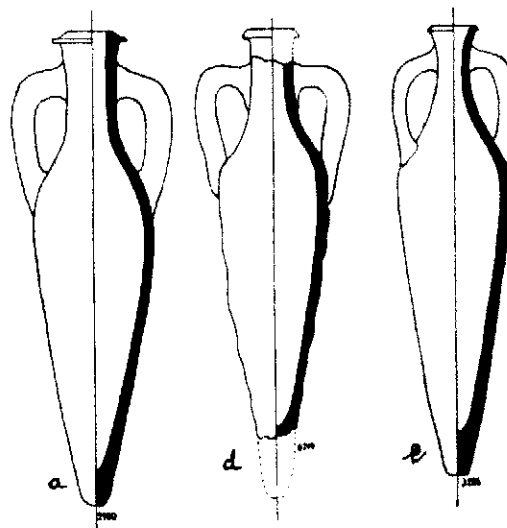
180. Hellenistic bottles, type 16. Scale, 1:4.

16. Bottle with heavy shoulder of hard pink ware, wet-smoothed (as above), with red bands around neck and shoulder (cf. No. 14).



181. Small Hellenistic vessels, types 17, 18, 19. Scale, 1:4.

19. Minute cup with stick-handle, of fine drab-brown ware.  
 a. Reg. No. 4832, S10-1001 cist. 1, Oct. 11, 1910. See Pl. 68 k.

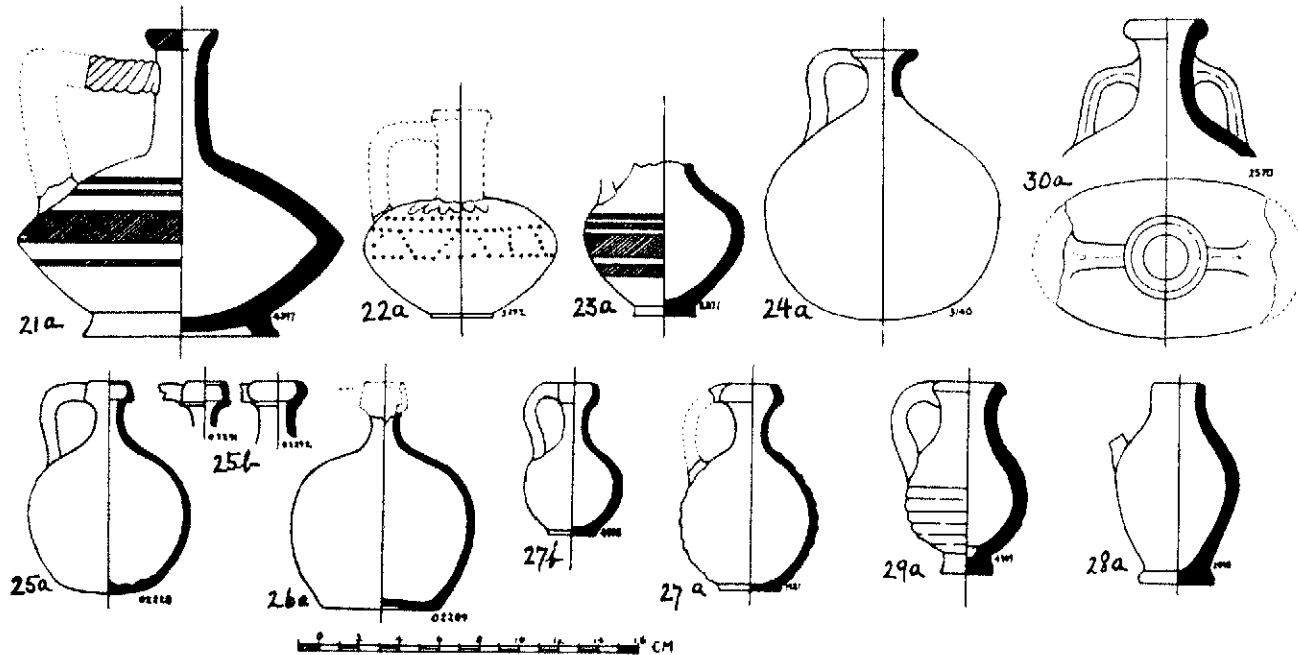


182. Hellenistic two-handled bottles, type 20. Scale, 1:4.

20. Two-handled bottle with tapering body, spiral turning marks on body. H., 20 cm. Red or drab ware.  
 a. Reg. No. 2450, S3 b, street, Oct. 7, 1909.  
 b. Reg. No. 3153, S5 b, June 29, 1910.  
 c. Reg. No. 3286, S5 c, July 2, 1910. See Pl. 67 k.  
 d. Dis. No. 218, S3 c, Sept. 25, 1909.

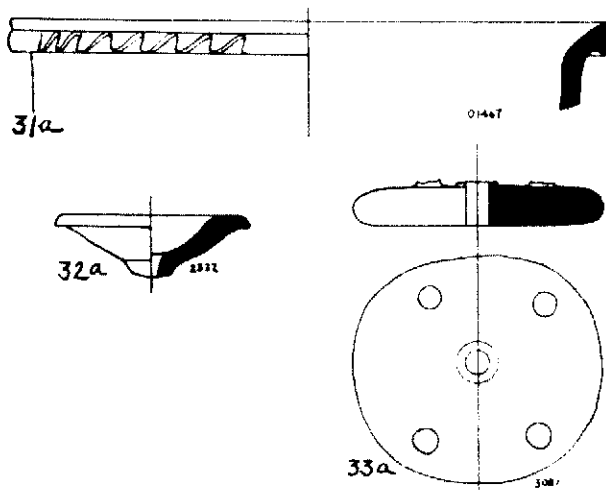


21. Squat, one-handled (twisted handle) jug of red ware, white wash, red bands around body. H., 15.5 cm.; diam. 16.5 cm.  
a. Reg. No. 4397, S9-906 sub, Sept. 6, 1910.
22. Squat, one-handled jug of buff ware, decorated with a pattern made of little impressed rings. H. of body, 6 cm.  
a. Reg. No. 3292, S5 h, July 2, 1910.
26. Jug like 25 with concave bottom.  
a. Dis. No. 2289, vault cistern 2.
27. One-handled bulging bottle with narrow neck and flat bottom, of fine buff ware, slightly ribbed. H., 8 cm.  
a. Reg. No. 1481, S1 cist. 8, June 20, 1909.  
b. Reg. No. 4405, S9 cist. 1, Sept. 6, 1910. See Pl. 67 j 1.



183. Hellenistic jugs, types 21 to 30. Scale, 1:4.

23. One-handled jug of fine buff ware with a gray slip and orange bands around body.  
a. Reg. No. 2871, S. G. T. 6, June 20, 1910.
28. Small jug with handle, of red-brown ware. H., 10 cm. Rimless mouth.  
a. Reg. No. 2048, L. T. 3 c, room 19 sub, Sept. 10, 1909.
29. Small jug with single handle and thick rim around mouth, of red-brown ware with red wash. H., 9.8 cm.  
a. Reg. No. 4909, S11-15, Oct. 19, 1910. See Pl. 67 i 1.
30. Two-handled flat bottle. Buff paste, wet-smoothed.  
a. Reg. No. 2570a, S2 corner cistern, Oct. 18, 1909.
31. Wide cylindrical pot with wavy rim. Coarse brown ware.  
a. Dis. No. 1467, L. T. 5, Sept., 1909. Fragment.
32. Funnel (?). Red ware.  
a. Dis. No. 2322, vault cist. 2, Aug. 24, 1909. See Fig. 184.  
b. Dis. No. 903, S10 d, Sept. 12, 1910. Diam., 9 cm.
33. Disc with traces of four posts and a hole through middle. Hard-baked drab ware.  
a. Reg. No. 3087, S2 III 68, June 26, 1910.



184. Hellenistic pottery, types 31-33. Scale, 1:2.

24. One-handled bulging jug with narrow neck and round bottom, of buff ware. H., 13.5 cm.  
a. Reg. No. 3140, S5 a, June 29, 1910.
25. One-handled bulging jug with heavy rim around mouth, round bottom. Fine red or drab ware.  
a. Dis. No. 2228, vault cistern 2.  
b. Dis. Nos. 2291, 2292 (necks of jugs of type 25 or 26), vault cistern 2.

- |  |   |
|--|---|
| <p>34. Hollow bowl with flat base, of red ware, unglazed.<br/>a. Reg. No. 1610, S2-47, Aug. 19, 1909. See Fig. 174, No. 51.</p> <p>35. Flat plate with ring-base, of red ware.<br/>a. Dis. No. 2041, S trench G, May 26, 1908. See Fig. 174, No. 52.</p> <p>36. Cylindrical dish with triangular external rim, of red ware.<br/>a. Dis. No. 2035, S trench F cistern (S7 cistern 5), Aug., 1908. See Fig. 174, No. 53.</p> | <p>37. Dish with flat rim, of red ware.<br/>a. Dis. No. 2034, S trench F cistern, Aug., 1908. See Fig. 174, No. 54.</p> <p>38. Wide dish like 37, of red ware.<br/>a. Dis. No. 2024, S trench F cistern, Aug., 1908. See Fig. 174, No. 55.</p> <p>39. Wide dish, of red ware.<br/>a. Dis. No. 2026, S trench F cistern, Aug., 1908. See Fig. 174, No. 56.</p> |
|--|---|

## II. Red-glazed pottery.

The red-glazed pottery found at Samaria in debris of the Hellenistic period is not true Arretine. A few examples with the characteristic Arretine glaze were found as follows:—

- a. Reg. No. 2787, Gateway, with Roman objects. See Pl. 68 m. and Fig. 185, marked Arr. a (top line).
- b. Reg. No. 4388, Samarra c, with coins ranging from 1st Cent. B.C. to 4th Cent. A.D., stamped SEX See Pl. 68 h 2.  
ANNI.
- c. Reg. No. 2595, S4, Oct. 21, 1909, stamped IXTHYB.

Of these, two (b, c) bore stamps as shown.<sup>1</sup> Great numbers of the dull-glazed red vessels were found, but none of them bore stamps. The paste of these vessels varies from a light yellow to a light red. The glaze is almost always dull. The forms are in part those of the black-glazed wares, and in general bear a greater resemblance to them than to Arretine forms.<sup>2</sup> The resemblance of the forms to those of the black-glazed vessels is emphasized by the similarity of the decoration. The red-glazed plates and bowls have the same kind of milled circles and impressed circular patterns as the black-glazed (cf. Fig. 174). The red-glazed basins and cups also show the fluting on the body (cf. Fig. 185, No. 12 with Fig. 172, No. 6) and the opaque white decoration (cf. Fig. 185, Nos. 11 and 13 with Fig. 173, Nos. 12, 13, 18, and 20) noted on some of the black-glazed vessels.

The forms of the red-glazed vessels are given in Fig. 185. The greater part of these are from vault cistern 2. Most of the pottery from this cistern is Hellenistic, while the coins range from 200 to 40 B.C. The cistern was filled up at the time of the building of the temple, and all its contents came from the debris of the Hellenistic houses. But similar pottery was found under other unmistakable conditions,—under the street floor in S3, in the street cistern (coins of 200–150 B.C.), and under the floor in L. T. It is therefore certain that this beautiful red-glazed pottery was in use during the Second Century B.C., if not earlier. Wherever Megarian potsherds were found, the red-glazed ware was found,<sup>3</sup> but where the one occurred in abundance the other was comparatively rare. Thus while the Megarian vases come down into the Second Century B.C., the latter part of that period is dominated by the red-glazed pottery.

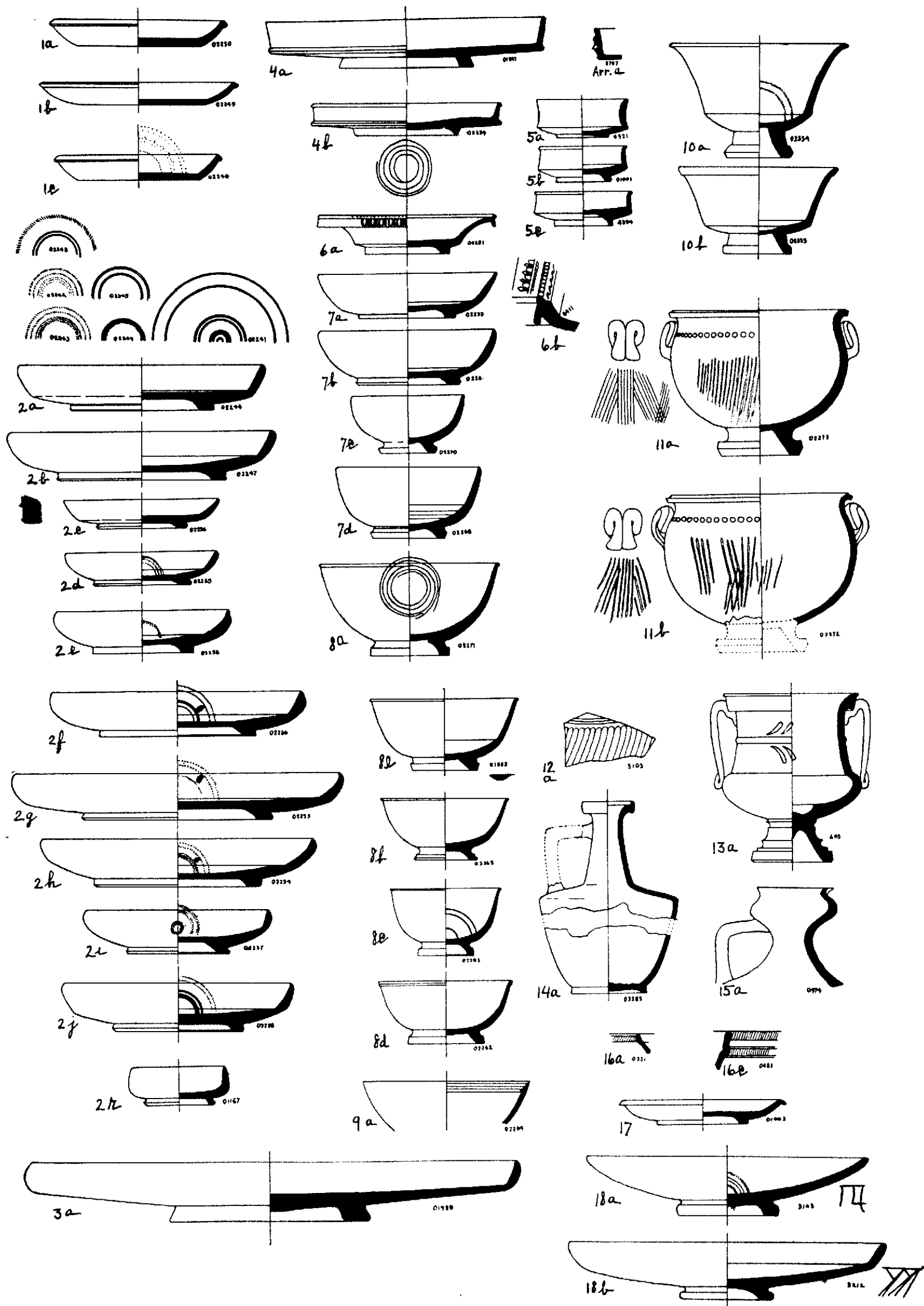
1. Plate, with flat bottom. The examples a–c are from vault cistern 2.  
d. Dis. No. 920, S10 b, Sept. 28, 1910.
2. Plate, deep, with ring-base. The examples a–j are from vault cistern 2. See Pl. 74 c and h.  
k. Reg. No. 3129, N. G. T. 3, June 23, 1910.

- l. Dis. No. 632, S8–821 S, Sept. 17, 1910.
- m. Dis. No. 856, S9–941, Sept. 22, 1910.
- n. Dis. No. 919, S10 b, Sept. 28, 1910.
- o. Dis. No. 1004, S10 d, Sept. 27, 1910.
- p. Dis. No. 1166, S11 z, Oct. 15, 1910.
- q. Dis. No. 1168, S11 z, Oct. 15, 1910.
- r. Dis. No. 1167, S11 z, Oct. 15, 1910.

<sup>1</sup>Only one other stamped fragment was found (Reg. No. 3622, S6 g). This appeared to be a flaring bowl with flat bottom, of red ware with darker particles. It was red-glazed inside only. The stamp was on the outside of the bottom and read — — — *si* or *is* — — —.

<sup>2</sup>See Dragendorff, *Terra Sigillata*, p. 40, Nos. 1–14.

<sup>3</sup>See Dragendorff, *Terra Sigillata*, p. 31: "Ueberschen ist . . . dass alle Megarischen spätestens ins II Jahrh. v. Ch. zu setzen sind."



185. Late Hellenistic vessels of fine red-glazed paste. Scale, 1:4.

3. Platter, with ring-base. No example from vault cistern 2.
  - a. Dis. No. 1928, Basilica Trench A, May, 1908.
4. Plate, deep, with upright sides and ring-base. Example b, from vault cistern 2.
  - a. Dis. No. 1897, S Trench E, July 27, 1908.
  - c. Reg. No. 2869, S. G. T. 6, June 20, 1910.
5. Bowl, with upright sides and ring-base. No example from vault cistern 2.
  - a. Dis. No. 921, S10 b, Sept. 28, 1910.
  - b. Dis. No. 1001, S10 d, Sept. 27, 1910.
  - c. Reg. No. 4394, S9-906 sub, Sept. 6, 1910. See Pl. 68 h 1.
6. Bowl, flaring, with decorated hanging rim and ring-base. Example a from vault cistern 2.
  - b. Dis. No. 411, S5 e, June 30, 1910.
  - c. Dis. No. 65, S2 S agricultural dirt, Aug. 30, 1909.
  - d. Dis. No. 79, S2 under vestibule, Aug. 7, 1910.
  - e. Dis. No. 107, S2-43 sub (not deep), Aug. 28, 1909.
  - h. Reg. No. 3077, S2 under portico above house floor, June 25, 1910.
  - i. Dis. No. 1161, S11 z, Oct. 14, 1910.
7. Bowl, with round body and ring-base. Examples a-d are from vault cistern 2.
  - e. Reg. No. 3124, S2 under portico, June 23, 1910.
  - f. Reg. No. 3854, S1 cistern 2, Aug. 10, 1910.
  - g. Reg. No. 4907, S11-13 cistern, Oct. 19, 1910.
8. Bowl, similar to No. 7 but with slight external molding on rim. Examples a-d are from vault cistern 2. See Pl. 74 g.
  - e. Dis. No. 1002, S 10 d, Sept. 27, 1910.
9. Bowl, probably similar to No. 7 but with internal molding on rim. The example given (incomplete), from vault cistern 2, was the only one.
10. Bowl, flaring, with high ring-base. Examples a-b from vault cistern 2. See Pl. 74 j.
  - c. Reg. No. 3173, S5 a, June 30, 1910.
11. Two-handled basin, with high ring-base (small krater?). Decorated with groups of shallow grooves on body and thick cream-white spots of paint below rim. The twisted loop-handles are pressed against neck and adhere thereto. Examples a-b from vault cistern 2. Incised lines on body, white dots around neck.
  - c. Dis. No. 285, S3 street, Oct. 7, 1909.
  - d. Dis. No. 376, S3 under wall between 322 and 323, Oct. 25, 1909.
  - e. Dis. No. 1085, S11-1, sub, deep, Oct. 11, 1910.
12. Body of two-handled vase, fluted.
  - a. Reg. No. 3103, S. G. T. 3, June 26, 1910.
13. Two-handled cup (kantharos). Incised decorations.
  - a. Reg. No. 605, S Trench G cistern (S7 cistern 5), Aug. 11, 1908. See p. 24, I 15.
14. Handled jug, with square shoulder and ring-base. Found in vault cistern 2.
15. Handled jug with spout lip.
  - a. Dis. No. 974, S10 d, Sept. 19, 1910.
16. Flaring bowl with band of incised lines (shading) on outside of rim.
  - a. Dis. No. 331, S3-303 just above W wall, Oct. 17, 1909.
  - b. Dis. No. 794, S8 c NE, Sept. 8, 1910.
  - c. Dis. No. 483 (two bands), S 7 cistern 2, Aug. 10, 1910.
17. Bowl, with overhanging rim and ring-base, resembling closely the forms of the earlier black-glazed ware. See Fig. 174, Nos. 31-33.
  - a. Dis. No. 1003, S10 d, Sept. 27, 1910.
  - b. Dis. No. 825, S9-905 under canal, Sept. 13, 1910.
18. Wide bowl, with small ring-base. No example in vault cistern 2.
  - a. Reg. No. 3143, S5 a, June 29, 1910. See Pl. 74 f.
  - b. Reg. No. 3212, S5 b, July 1, 1910.

### III. Decorated pottery.

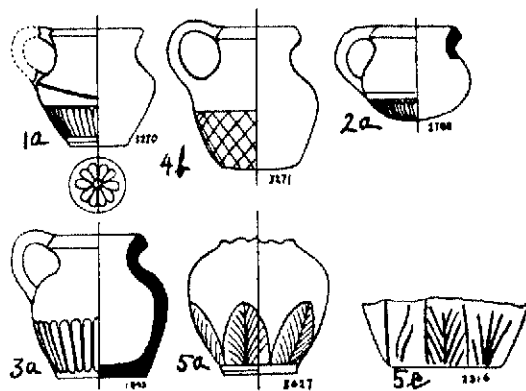
The decorated pottery of the Hellenistic period shows: 1. Milled and impressed patterns on the ordinary pottery and on the black and red-glazed pottery (see Figs. 174 and 185 above); 2. Red bands on ordinary pottery (see above); 3. Relief decoration. As the first two classes have been necessarily dealt with under the undecorated wares of the same sorts above, there remains only the molded pottery.

*a. Molded lamps. See Lamps, Chapter V C., page 319.*

*β. Cups with patterns in relief or in incised lines.*

1. Cups with single handle, of gray paste, dull black surface, flat bottom, decorated with tongue pattern in relief (made with a mold) around base of body and on bottom. H., 6 cm.
  - a. Reg. No. 3270, S5 a, July 2, 1910.
2. Same, of same ware, with round bottom, decorated with tongue pattern in relief on bottom. H., 7 cm.
  - a. Reg. No. 2788, Cliff Trench, Aug. 10, 1909.

3. Same, of fine light red ware, red wash, flat bottom, decorated with tongue pattern in relief around base of body. H., 6-7 cm.
  - a. Reg. No. 1845, H. S. 1 black debris, July 22, 1909.
  - b. Reg. No. 4908, S11-13 cistern, Oct. 19, 1910.
4. Same, of same ware as No. 3, flat bottom, decorated with criss-cross pattern of incised lines. H., 7-7.5 cm.
- a. Reg. No. 3154, S5 b, June 29, 1910.
- b. Reg. No. 3271, S5 c, July 2, 1910.
5. Buff clay, with palmette pattern in incised lines. H., ca. 7.5 cm.
  - a. Reg. No. 3027, S. G. T. 1, June 24, 1910.
  - b. Dis. No. 1322, H. S. thieves' hole, July 24, 1909.
  - c. Dis. No. 2316, vault cistern 2, Aug. 24, 1909.



186. Hellenistic decorated cups. Scale, 1:4.

#### γ. So-called Megarian<sup>1</sup> Bowls.

Molded bowl (Megarian type; for form see Fig. 173, No. 19), fine red paste. The glaze varies from a lustrous black through a mottled red or brown to a dull red. The pattern is in molded relief.

In addition to the abundance of fragments, one small fragment was found (Reg. No. 4735, S11 d, Oct. 1, 1910) which seemed to be from a mold. This shows the edge of an acanthus leaf, and is of fine red paste, but it is possible that this is a cast made in some local attempt at imitation of the imported wares. It would not be safe to infer from this single fragment that the Megarian vases were made locally.

The ornamentation consists of a border just below the lip, a body in one or more registers, and a base rosette.

The border shows the following forms:

- a. Egg and dart pattern between two lines or two rows of dots; see Pl. 72 a, e, f, g. Reg. Nos. 2462, 2545, 3269, 3540, 3165. Dis. Nos. 176, 1500, 254, 172, 185, 129, 1411, 171, 1539.
- b. Flower pattern; see Pl. 72 b 2, 3; f 5. Reg. No. 1523. Dis. No. 136, 172, 246, 254 b, 408, 1409, 1447.
- c. Dagger (?) pattern; see Pl. 72 c 3. Dis. No. 174 c.
- d. Vine pattern; see Pl. 72 b 6. Dis. No. 172.
- e. Laurel pattern; see Pl. 72 c 2. Dis. No. 174 b.
- f. Scroll pattern; see Pl. 72 g 5. Dis. No. 200.
- g. Meander pattern; Pl. 73 j 9. Dis. No. 1419, L. T. 1 b cave 4.

The body consists usually of a large rosette of leaves, arranged around the small base rosette. This body rosette consists of (a) large acanthus leaves with small laurel leaves between (Pl. 72 a); (b) acanthus and laurel leaves alternately (Pl. 72 e); (c) acanthus and long slender looplike flowers or leaves (conventional lilies?) (Pl. 72 d); (d) acanthus and palm leaves (Pl. 72 c 4); (e) acanthus and palm trees (Pl. 73 b); (f) laurel leaves; (g) large laurel leaves with acanthus in field (Pl. 73 h); (h) long slender loop-forms (Pl. 72 e 6). The field is sometimes empty (see 1 a, below), but above the leaves in the field there is often a row of objects,—springing lions to left (see 5 a, below), birds to right (see 5 b, below), a line of pendants on a looped line (see 5 k, below), masks, bucrania, palmettes, rosettes, wreaths,

<sup>1</sup>I have retained this name, following Dragendorff, *Terra Sigillata*, p. 28: "Ich behalte den einmal eingebürgerten Namen bei,

obgleich die Vasen, wie Robert zuletzt ausdrücklich betont hat, sicher nicht in Megara verfertigt sind."

vases (see 6 m, below), etc. In the field between the leaves occur scrolls, rosettes (see 5 c, below), etc., and in one case a figure with a scroll (see 2 a, below). Less often the body of the bowl is covered with an overlapping leaf pattern or a pyramidal pattern.

In addition to the body rosette and its field ornamentations, there is sometimes a row of figures between the body rosette and the border, enclosed between two lines or two rows of dots. The most frequent form consists of (a) a draped female figure and a smaller naked male (see 6 a-c, below); (b) Cupid, r., with bow, and another object or figure (see 6 d, e, below); (c) warriors, one on foot, r., and one on horse, l. (see 6 f, g, below); (d) naked boy with a toy (?), l. (see 6 o, below); (e) winged female with an eagle (?), l. (see 6 n, below); (f) dancing naked male figures (see 6 h, below); (g) vase and dolphin (see 6 k, below); (h) vase and scorpion (see 6 l, below). One minute fragment shows a galley as found on Phœnician coins (Pl. 72 c; see 6 p, below).

Reg. No. 1444 (Pl. 72 f 1; see 7 a, below) which shows the same technique and form, differs from all the above-mentioned vases in lacking the body rosette, and in being imperfectly glazed. The fragment was too small to show the bottom where the small rosette may have been. There are two rows of figures separated by a raised line. Below there is a border of small palmettes enclosed in raised lines. The red glaze covers the relief, including the palmette border, but not beyond.

1. Body rosette (acanthus and laurel) without objects in field.
  - a. Reg. No. 2462, S3 street cistern, Oct. 17, 1909. Pl. 72 a.
  - b. Reg. No. 2825, N. G. T. 7, June 15, 1910. Pl. 73 a 4.
  - c. Dis. No. 176, S3 a, Oct. 3, 1909.
  - d. Dis. No. 189, S3 a W, Oct. 8, 1909.
  - e. Reg. No. 3104, S. G. T. 3, June 26, 1910.
2. Body rosette with figure between acanthus leaves.
  - a. Reg. No. 2577, S3 street cistern, Oct. 20, 1909.
3. Body rosette with palm tree between acanthus leaves.
  - a. Reg. No. 2520, S3 street cistern, Oct. 12, 1909. Pl. 73 b.
4. Body rosette with palm tree between two figures, between acanthus leaves.
  - a. Reg. No. 2851, N. G. T. 8, June 17, 1910. Pl. 73 a 3.
5. Body rosette with ornament above.
  - a. Reg. No. 3269 (lions), S5 a, July 2, 1910.
  - b. Reg. No. 3540 (birds), S5 e, July 18, 1910.
  - c. Reg. No. 3381 (rosettes), S5 h, July 8, 1910.
  - d. Dis. No. 171a (pendants), S3 c, Oct. 5, 1909. Pl. 72 e 1.
  - e. Dis. No. 172b (bucrania), S3 c, Oct. 5, 1909. Pl. 72 b 3.
  - f. Dis. No. 1500e (bucrania), L. T. 5 street, Sept. 30, 1909. Pl. 72 g 7.
  - g. Dis. No. 200a (wreaths), S3 b SE, Oct. 4, 1909. Pl. 72 g 5.
  - h. Dis. No. 200b (masks), S3 b SE, Oct. 4, 1909. Pl. 72 g 1.
  - i. Dis. No. 885 (vase on column), S9 north top layer, 1910.
  - j. Dis. No. 254 (bucrania), S3 c, Oct. 5, 1909.
  - k. Reg. No. 3165 (pendants), S5 c, June 29, 1910.
  - l. Dis. No. 129 (pendants), S2-45, Aug. 7, 1910.
  - m. Dis. No. 189 (pendants), S3 a W, Oct. 9, 1910.
  - n. Dis. No. 174d (rosettes), S3 a W, Oct. 6, 1909. Pl. 72 c 4.
  - o. Reg. No. 2545 (rosettes), S3 street cistern, Oct. 17, 1909.
  - p. Dis. No. 1500c (rosettes and scorpions), L. T. 5 street, Sept. 30, 1909. Pl. 72 g 6.
6. With register between body rosette and border. Draped female figure and smaller naked male figure.
  - a. Reg. No. 2522, S3 street cistern, Oct. 12, 1909. Pl. 73 e 1.
  - b. Reg. No. 2521, S3 street cistern, Oct. 12, 1909. Pl. 73 e 2.
  - c. Reg. No. 2491, S3-306, Oct. 9, 1909. Pl. 73 d 3. Cupid with bow, r., towards obscure figure or object.
  - d. Reg. No. 1523, S1 S, June 22, 1909. Pl. 72 f 5.
  - e. Reg. No. 3253, S5 f, July 2, 1910. Warriors, one on foot, r., and one on horse, l.
  - f. Dis. No. 1466, L. T. 5, south of apsidal building, Sept. 8, 1909. Pl. 73 j 2.
  - g. Dis. No. 1539, L. T. 5-53-54, Sept. 18, 1909. Pl. 73 j 10.
- Dancing naked male figures.
  - h. Reg. No. 2433, S3 b between street walls, Oct. 6, 1909. Pl. 73 k 3.
- Row of figures holding hands.
  - i. Reg. No. 1461, S1 N top, June 8, 1909. Pl. 72 f 3.
  - j. Reg. No. 4087, S3 street, Oct., 1909. Pl. 73 i.
- Vase and dolphin.
  - k. Reg. No. 3437, S4-361, July 12, 1910. Pl. 72 d 2.
- Vase and scorpion (?).
  - l. Reg. No. 2492, S3 a W, Oct. 9, 1909. Pl. 73 d 4.
- Vase and dancing figure.
  - m. Reg. No. 3566, S6 e E, July 21, 1910.
- Winged female and eagle (?).
  - n. Dis. No. 174c, S3 a W, Oct. 6, 1909. Pl. 72 c 3.

- Naked boy with toy (?).
- o. Dis. No. 1500b, L. T. 5 street, Sept. 30, 1909. Pl. 72 g 3.
- Galley.
- p. Dis. No. 174a, S3 a W, Oct. 6, 1909. Pl. 72 c 1.
7. Row of figures with hare on ground; below it, row of figures dancing (no body rosette).
- a. Reg. No. 1444, S1 N top, June 3, 1909. Pl. 72 f 1.
8. Fragments, too small to be grouped above, but mentioned to show provenance.
- a. Reg. No. 1451, S1, June 3, 1909. Pl. 72 f 6.
- b. Reg. No. 2430, S3-306, Oct. 6, 1909.
- c. Reg. No. 2432, S3 b between street walls, Oct. 6, 1909.
- d. Reg. No. 2842, N. G. T. 4, June 16, 1910.
- e. Reg. No. 2843, N. G. T. 6, June 20, 1910. Pl. 73 a 1.
- f. Reg. No. 2870, S. G. T. 6, June 20, 1910.
- g. Reg. No. 3494, L. T. E., July 14, 1910.
- h. Dis. No. 136, S2-28, Sept. 2, 1909.
- i. Dis. No. 144, S2 sub pavement W, Sept. 7, 1909.
- j. Dis. No. 246, S3 f S, Sept. 27, 1909.
- k. Dis. No. 247, S3 f, Sept. 30, 1909.
- l. Dis. No. 484, S7 cist. 2 (stairway), Aug. 10, 1910.
- m. Dis. No. 508, S7-451, black trench, Sept. 8, 1910.
- n. Dis. No. 779, S8 d next Greek Fort Wall, Sept. 20, 1910.
- o. Dis. No. 1049, S10 d, Oct. 13, 1910.
- p. Dis. No. 1409, L. T. 1 b cave 3, Aug. 27, 1909.
- q. Dis. No. 1411, L. T. 1 b cave 3, Aug. 27, 1909.
- r. Dis. No. 1447, L. T. 5 a, Oct. 5, 1909.
9. Body pattern of overlapping leaves more or less conventionalized.
- a. Reg. No. 2559, S3 corner cistern, Oct. 18, 1909. Pl. 73 f.
- b. Reg. No. 3127, S. G. T. 4, June 28, 1910.
- c. Dis. No. 194, S3 a W, Oct. 8, 1909.
- d. Dis. No. 1547, L. T. 63, Oct. 9, 1909.
10. Pyramidal pattern on body, black-glazed.
- a. Reg. No. 2523, S3-320, Oct. 12, 1909. Pl. 73 g.

## D. ROMAN POTTERY

The scantiness of exactly dated material makes it difficult to deal with the Roman pottery. Cistern 1 in the Basilica yielded an enormous mass of potsherds; but these presented only a few forms, such as the large two-handled jars and the two-handled cooking-pots, both of characteristic thin, hard, red ware finely ribbed, and a number of fragments of large tiles. These were mixed with coins ranging through the first four Christian centuries. The smaller vessels found, which, on account of their absence from the Preherodian deposits, were ascribed to the Roman period, were equally uncertain in date. The lamps are dealt with under Lamps, Chapter V E and F, and the glass vessels briefly under Glass, Chapter VII A III. The terra sigillata vases are given in Chapter III C II, above.

## CHAPTER IV

### POTTER'S MARKS ON LARGE JARS, INCLUDING RHODIAN STAMPS

In contradistinction to the ostraca, the inscriptions giving contents of the vessel, and the marks of ownership written or scratched on the vessels by the owner, this chapter deals with the maker's marks applied to the jar previous to baking. The Prehellenistic maker's marks are of two sorts, letters or other marks scratched on the vessel, or the impression of a single seal. As will be seen in the list A below, both of these were rare. From the Hellenistic period, however, over a thousand, legible and illegible, stamped handles of wine-jars were found, representing about half as many jars. The greater part of these were Rhodian; but a few were found from Knidos, Thasos, and other places (see lists B, C, D, E, below).

#### A. EARLY JAR-MARKS

##### I. Incised marks.

- |  |  |
|--|--|
| 1. Handle of jar of type Isr. Pott. I 1, incised with a cross, possibly the letter $\Gamma$ .<br>a. Reg. No. 1673, S2 yellow debris. See Pl. 64 g.<br>b. Dis. No. 541, S8-882, Sept. 22, 1910. | a. Reg. No. 3965, S4-401 courtyard floor, Aug. 18, 1910. See Fig. 153, No. 2.  |
| 2. Handle of jar of type Isr. Pott. I 1, incised with a mark, possibly the letter $\Gamma$ .   | 3. Handle of jar of type Bab.-Grec. Pott. I 1, incised with letter $\Sigma$ (or A).<br>a. Reg. No. 1517, H. S. 1, June 22, 1909. |

##### II. Seal Impressions.

- |   |  |
|---|--|
| 1. Handle of jar of type Bab.-Grec. Pott. I 1, stamped with seal impression, figure of Hermes (?).<br>a. Reg. No. 1516, H. S. 1, June 22, 1909. See Pl. 57 f 2. | 3. Twin handle from small amphora of fine drab paste, stamped on top with seal impression, figure of Hermes (?).<br>a. Reg. No. 2445, S3 street sub, Oct. 6, 1909. |
| 2. Handle of jar, apparently of type Bab.-Grec. Pott. I 6, with seal impression, winged sphinx.<br>a. Reg. No. 2190, S3 a W, Oct. 6, 1909. See Pl. 57 f 1.      | 4. Handle of jar of type Bab.-Grec. Pott. I 6, with seal impression, a pomegranate.<br>a. Reg. No. 3308, S5 d, July 4, 1910. See Pl. 64 k.                         |

#### B. RHODIAN JAR HANDLES<sup>1</sup>

The stamps are classified below as follows:

- I. Maker's name in the genitive, usually with symbol, 84 names on 259 handles.
- II. Maker's name in the genitive, followed by month name in the genitive, rarely with symbol, 29 names on 58 handles.
- III. Maker's name in the genitive, preceded by month name in the genitive, rarely with symbol, 8 names on 17 handles.

<sup>1</sup>See Macalister, Gezer, II, pp. 351-364.



- IV. Name of eponym in the genitive, preceded by ΕΠΙ, usually with symbol, 47 names on 72 handles.
- V. Name of eponym in the genitive, preceded by ΕΠΙ, and followed by month name in the genitive, rarely with symbol, 88 names on 220 handles.
- VI. Monogram stamps, usually accessory to large stamps.

Two jar necks were found with the handles attached on both sides (Reg. Nos. 1667 and 4024). One handle of Reg. No. 1667 reads ΣΩΚΡΑΤΕΥΣ, with torch on the right (see I 72, below), and the other reads ΕΠΙΣΩΔΑΜΟΤ|ΠΑΝΑΜΟΤ|ΔΕΥΤΕΡΟΤ (see V 76, below). One handle of Reg. No. 4024 reads ΘΕΤΔΩΡΟ[Υ]|ΑΡΤΑΜΙΤ[ΙΟΥ] (see II 12, below), and the other, ΕΠΙΣΙ|—Υ(?)—ΚΙ with a Helios-head on the left. Thus, as Prof. Macalister has stated (Gezer, II, p. 363), handles of class I (259 examples) were joined with those of class V (220 examples), while handles of classes II and III (75 examples) were joined with those of class IV (72 examples). The numerical correspondence is striking. In two cases, the maker's name was found on the stamp with the name of the eponym: ΕΠΙΑΡΧΕΜ|ΒΡΟΤΟΤΑΓΑ|ΘΟΡΟΤΔΟΥ (Reg. No. 4899, S11-13 sub) and ΑΓΑΘΟΡΟΥΔΟΥ|ΕΠΙΘΕ|Ρ[ΣΑΝ]ΔΡΟΥ (Reg. No. 4098, L. T. 1 a).<sup>1</sup> Reg. No. 4044 presented a month name only (a circular stamp with a rose and ΣΜΙΝΘΙΟΥ). Possibly also No. 3283 bears a month name,—a rectangular stamp with a sword above and ΚΑΡ . . . below. These two are not included in the following lists.

## I. MAKER'S NAME, WITH AND WITHOUT SYMBOL

- |  |  |
|--|--|
| 1. ΑΓΑΘΟΚΛΕΥΣ, H. S. 2, S3 c, S3 b (3), S3 street cistern, S6 b, S10 d, N. G. T. 8.  | 20. ΒΡΟΜΙΟΥ, torch (?) on r., S3 b; without symbol, L. T. 39, L. T. 64, S2 c, S3 a, S3-307, S4-361, S5 a, S5 h, S6 f, S7, S10 b, N. G. T. 2, N. G. T. 4. |
| 2. ΑΓΑΘΟΡΟΥΔΟΥ, See lines 9, 10, paragraph above.  | 21. ΔΑΗΜΩΝ, S3-321.  |
| 3. ΑΓΗΞΙΠΠΟΣ, star above, S6 f.  | 22. ΔΑΙΟΦΑΝΤΟΥ, S6 g.  |
| 4. ΑΘΑΝΑΔΟΤΟΥ, cornucopia on right, S4 a.  | 23. ΔΑΜΙ? Κ?—Υ, L. T. 5.   |
| 5. ΑΚΤΑΡΩΝΟΣ, caduceus below, S2 South in Greek Fort Wall, S11 under Roman street, S3 corner cistern.  | 24. ΔΑΜΟΘΕΜΙ ΟΞ, twined cornucopias on l., double axe below, S3 f.   |
| 6. ΑΜΥΝΤΑ, laurel wreath on right, S3 street cistern, L. T. 4 b 52, S10 a, S11-2.  | 25. ΔΑΜΟΚΡΑΤΕΥΣ, circular, rose, vault cistern 1, S3 f, S3 street, S3-306, S5 c, S5 e, S6 b, S10 a, S8-805, N. G. T. 4, N. G. T. 8, Bas. 13 sub.         |
| 7. ΑΝΔΡΟΝΙΚΟΥ, S5 g.   | 26. ΔΙΟΔΟΤΟΥ, S3 e, f, S10 b.  |
| 8. ΑΝΤΙΜΑΧΟΥ, caduceus below head r., S3 a, S3-321, S7 d; caduceus below head l., S3-311; caduceus above head l., S6 b, S7 b.                    | 27. ΔΙΟΚΛΕΙΑΣ, with four stars, S2-7, S3 street; without symbol, L. T. 5 a, S6 f, N. G. T. 4.  |
| 9. ΑΠΟΛΛΟ ΦΑΝΕΥΣ, bunch of grapes on r., L. T. 5-63, S10 d.  | 28. ΔΙΟΥ, L. T. 1 c cave 5, S3 street, S3-311, S8-801.   |
| 10. ΑΠΟΛΛΩΝΙΟΥ, S5 a, S7 a.  | 29. ΔΙΞΚΟΥ, caduceus below head l., S11-3 second metre.  |
| 11. ΑΡΑΤΟΦΑ[ΝΕΥΣ], S5 d.   | 30. ΔΙΩΝΟΣ, rectangular with rose above, S5 f; without symbol, S3 c, S11-1 under Roman street.   |
| 12. ΑΡΕΤΑΚΛΗΣ, with rosette on l., S9 c.   | 31. ΔΩΡΙΩΝΟΣ, L. T. 3 c 32 sub.  |
| 13. ΑΡΙΞΤΑΡΧΟΥ, with four stars, one in each corner, S3 f W, S6 c cistern; with five stars, the fifth being above, S3-311; without symbol, S5 a. | 32. ΔΩΡΟΘΕΟΥ, circular, rose, S3 d, S3-306, S3-314, S5 c, N. G. T. 1.  |
| 14. ΑΡΙΞΤΙΩΝΟΣ, with anchor below, vault cistern 1; without symbol, S3 c, L. T. 1 a, S9 N, S10 a.  | 33. ΕΛΛΑΝΙΚΟΥ, L. T. 5 south of enclosing wall, Kaid's Land b.   |
| 15. ΑΡΙΞΤΟΚΛΕΥΣ, circular, rose, S3 c, S3 b, S3 street, H. S. 1, S4 e, S5 c (2), S6 f.   | 34. ΕΡΜΙΑ, circular, Helios-head, S3 a, S5 c (2), S6 a (with sub-stamp Δ'), S8-803, L. T. 63.  |
| 16. ΑΡΙΞΤΟΚΡΑΤΕΥΣ, four stars, one in each corner, S3 street, S3-311, S6-626 E, S10 e; with two crosses below, one on each side, S5 h.           | 35. ΕΥΦΑΝΟΡΟΣ, with caduceus below head r., S3 street, S3 a, S4 a, S5 a, c, S9 N, Bas. N. sub.   |
| 17. ΑΡΙΞΤΟΥ, S3 c W.   | 36. ΕΥΚΛΕΤΟΥ, S5 b.  |
| 18. ΑΡΙΞΤΩΝΟΣ, caduceus above head r., S3 street, S3 street cistern.   |  |
| 19. ΑΤΤΑΛΟΥ, S11-1 under Roman street.   | 37. ΖΗΝΩΝ,   |

<sup>1</sup>See Macalister, Gezer, II, p. 363, where Agathoroudos is said to occur with the names of the eponyms Nikasagoras and Aristakos.

38. ΖΗΝΩΝΟΞ, circular, rose, S3 f.  
 39. ΗΦΑΙΞΤΙΩΝΟΞ, with caduceus below head r., S7 d.  
 40. ΗΡΑΚΛΕΙΤΟΥ, S3 f, S3 d (ΗΡΑΚΛΙΕΤΟΥ).  
 ΗΡΑΚΛΙΤΟΥ, with four stars, S2 c.  
 41. ΘΕΜΙ|ΞΤΙΩΞ, with bunch of grapes on l., L. T. 5 under street.  
 42. ΘΕΞΜΟΚ[ΛΕΙ]ΤΟΥ, S6 e.  
 43. ΘΕΥΜΝΑΞΤΟΥ, lozenge stamp with plant spray above and helmeted head r. below, S5 f.  
 44. ΘΕΩΝ, circular, rose, S3-321.  
 45. ΙΑΞΟΝΟΞ, rectangle in relief, S6 e, f.  
 46. ΙΜΑ, caduceus above head r., S11 x, Gateway N, Roadway; caduceus above head l., S10 b; caduceus below head r., S6 f (2), L. T. 53; caduceus below head r. and cornucopia (?) on l., S5 a, S7 a, S9-1001.  
 47. ΙΠΠΟΚΡΑΤΕΥΞ, circular, rose, S3 a (2), S5 d and f, S6 g, S11-1 sub, L. T. 4 N of 46, L. T. E. a and c, N. G. T. 7.  
 48. ΙΞΙΔΩΡΟΞ, rectangular, rose on r., S4-361.  
 49. ΚΑΛΛΙΟΥΞ, four stars, S7-755.  
 50. ΚΡΕΟΝ|ΤΟΞ, S8 e west of Greek Fort Wall.  
 51. ΜΕΝΕΚΡΑΤΕΥΞ, S3-307, S5 e, S8 b.  
 52. ΜΕΝΩΝΟΞ, caduceus below head l., S3 street, S11-1 sub.  
 53. ΜΗΝΟΘΕΜΙΟΞ, double axe below head r., twined cornucopias on l., S5 b and c, S10 a, L. T. under calidarium.  
 54. ΜΙΔΑ, caduceus below head r., bunch of grapes on r., S2-63, S5 a, S6 b, S7 c, L. T. 5 b (2), L. T. 1 b, L. T. E., Cl. T., Bas. 13 sub.  
 55. ΜΟΞΧΟΥ, S2-63, S3-334 cistern, S11-6.  
 56. ΝΑΝΙΟΞ, S4-355 sub, S5 c and f and h, S10 b deep, S11-3.  
 57. ΝΙΚΑΡΙΔΟΞ, S3 street cistern, S6 f, S8-803, S11 x.  
 58. ΝΙΚΑΞΙΩΝΟΞ, circular, rose, with anchor (?) between ends of name, S2-69.  
 59. ΝΥΚΙΟΥ, with standing draped figure on r., H. S. 1.  
 60. ΞΕΝΟ, S8-811.  
 61. ΟΛΥΜΠΟΥ, torch thrust through a ring, on r., S3 c and f, S6 c; small rose on r., Bas. cistern 1.  
 62. ΟΝΑΞΙΟΙΚΟΥ, S2 between west walls of Temple SW corner.  
 63. ΠΑΓΧΑΡΕΥΞ, S3 street, S11 y.  
 64. ΠΑΥΞΑΝΙΑ, S1 II 12, S3 a, S3-311, S3 corner cistern, S4 g, S5 a and c and e and street, L. T. E. a; rectangular with rose below, L. T. 63.  
 65. ΠΟΛΥΑΡΑΤΟΥ, double axe below head r., twined cornucopias on l., S3 e, H. S. 1; with harpoon (?) below, S11 y.  
 66. ΠΟΛΥΞΕΝΟΥ, four stars, scroll below, S3 a, S10 d; four stars and scroll above, S2-36.  
 67. ΞΑΜΙΟΥΞ, two stars above, S6 b.  
 68. ΞΑΡΑΠΙΩΝΟΞ, S10 d.  
 69. ΞΑΤΥΡΟΥ, reversed, S3 f, S5 e.  
 70. ΞΤΡΑΤΙΩΝΟΞ, four stars, L. T. 3 c 32 sub.  
 71. ΞΤΡΑΤΟΝΙΚΟΥ, circular, rose, S3 d.  
 72. ΞΩΚΡΑΤΕΥΞ, with ring and torch on r. (the other handle reads ΕΠΙΞΩΔΑΜΟΥ|ΠΑΝΑΜΟΥ|ΔΕΥΤΕΡΟΥ), S2 cistern 14; with ring and torch on r., S2 Temple SW corner, S3 f, S3 street (2), S3 street cistern, S3-311, S3-320, S5 h, S6 b and g, N. G. T. 5, N. G. T. 8; without symbol, L. T. 5 south of Temple. N. Gateway (1909).  
 73. ΞΩΞΙΦΙΑ, caduceus below, S3 a, L. T. 62.  
 74. ΞΩΞΙΚΛΕΥΞ, star on r., S5 b.  
 75. ΞΩΞΤ|ΠΑΤΟΞ, bunch of grapes on r., S7 c; bunch of grapes on l., S6 f.  
 76. ΞΩΤΑΙ|ΡΟΥ, circular, eagle l., head turned back, outspread wings, S2-42 sub, Gateway SW tower (1909); rectangular without symbol, S4 e.  
 77. ΞΩΤΗΡΙΟΥ, S3 f, S3 corner cistern, S5 e, H. S. 1, H. S. 2, L. T. 2 a.  
 78. ΤΙΜΟΥΞ, S5 b (2), S6 e, H. S. 1.  
 79. ΦΑΝΙΑ, vault cistern 2, S3 street, L. T. 39, N. Gateway, N. G. T. 5. See II 29. With ivy spray below, N. Gateway.  
 80. ΦΙΛΑΙΝΙΟΥ, S9-940.  
 81. ΦΙΛΟΚΛΕΥΞ, caduceus below head r., L. T. 1 c.  
 82. ΦΙΛΟΚΡΑΤΕΥΞ, S5 f.  
 83. ΦΙΛΩΝ[ΙΔΑ] sword (?) below head l., L. T. 1 c.  
 84. ΦΩΔΩΛΟC,

## II. NAMES OF MAKER AND MONTH (BOTH IN GENITIVE), SYMBOLS RARE

1. ΑΓΛΟΥΜΒΡΟΤΟΥ, Hyakinthios, S3 a.  
 2. ΑΓΟΡΑΝΑΚΤΟΥ, Thesmophorios, S6 e; Sminthios, S2 under Herodian stair, S. G. T. 2; Artamitios, S7 c, S6 c (-ΤΟΞ), L. T. 39; Agrianios, S10 e; Hyakinthios, S8 b below Roman level; Dalios, S5 h; Karneios, S3-321.  
 3. ΑΘΑΝΑΔΟΤΟΥ, Dalios, S1 above basins. See I 4.  
 4. ΑΝΔΡΙΟΥ, Diosthyos, S6 b.  
 5. ΑΞΠΑΞΙΑ, Agrianios, S11 N.  
 6. ΑΥΤΟΚΡΑΤΕΥΞ, Artamitios, S5 c (oval frame).  
 7. ΔΑΜΟΝΙΚΟΥ, Hyakinthios, S6-626.  
 8. ΔΙΟΓΕΝΗΣ, Badromios, S8 d.  
 9. ΔΙΟΚΛΗΣ, Artamitios, L. T. E. a.  
 10. ΕΙΛΟΞ, Panamos-Deut., S3 a.  
 11. ΕΠΙΓΟΝΟΥ, Sminthios, S5 SW corner; Artamitios, S5 d.  
 12. ΘΕΥΔΩΡΟΥ, Artamitios (second handle has ΕΠΙΞΙ| ]ΥΑΚΙ with Helios-head on left), L. T. 32 sub; Agrianios, S3-311; Theudaisios, S3 d.  
 13. ΙΕΡΩ[Ν]|ΟC ΚΑΡΝ|ΕΙΟΥ, S5 e.  
 14. ΙΞΙΔΩΡΟΞ, Badromios, S3 c.  
 15. ΚΡΕΟΝΤΟC, Sminthios, S3 g; Hyakinthios, S. G. T. 4. See I 50.  
 16. ΜΑΡΞΥΑ, Theudaisios, S3 a; Badromios, L. T. 32 sub; Agrianios, S3 b, S5 b; Karneios, S3 street, H. S. 1.

- |   |  |
|---|--|
| 17. MENANΔP[OY], Panamos, S3 a.   | 23. NE-----, Badromios, S3 street.   |
| 18. MENTOP OCAPTA MITIOC, Gateway N deep (1909);  | 24. ΞΕΝΟΦΑΝΤΟΥ (first o omitted), Thesmophorios, S6 b.                               |
| MENTOPOC CMINΘIOY, S5 h.  | 25. ΞΕΝΟΞΤΡΑΤΟΥ, circular, rose, Sminthios, S3 a; Artamitios, S3 a.                  |
| MENTOPO CYAKINΘI OY, in a frame, S10 a.   | 26. ONAΞΑΝΔΡΟΥ, circular, rose, Hyakinthios. L. T. 1 b.                              |
| 19. ΜΕΝΩΝΟC, Theudaisios, S5 h; Artamitios, S3 a.   | 27. ΠΑΞΙΩΝ, in a rectangle of dots, Artamitios, N. Gateway; Agrianios, S3 c, S3-314. |
| 20. ΜΕΝΩΝΟΞ, circular, rose, Panamos, S5 c, L. T. E. a; Dalios, S5 g. See I 52.                         | 28. ΞΑΜΟΞ, Disthyos, S3 street cistern, S10 a.                                       |
| 21. ΜΙΚΥΘΟΥ, Sminthios, S3 street cistern; Agrianios, S3 b; Karneios (with caduceus below), L. T. E. b; | 29. ΦΙΛΑΙΝΙΟΥ, Panamos, S5 h. See I 80.  |
| MIKY?Θ  symbol? OYAP TA[ ], S3 f.   |  |
| 22. ΝΕΜΩΝΟΞ, (for ΜΕΝΩΝΟΞ?), Hyakinthios, with thyrsus between, L. T. E. c.                             |  |

## III. PERSONAL NAME PRECEDED BY MONTH NAME (BOTH IN GENITIVE)

- |   |   |
|---|---|
| 1. Thesmophorios ΑΓΑΘΟΚΛΕΥΞ, S6 e.        | 3. Agrianios ΑΡΙΞΤΕΙΔΑ, star on r., S1 cistern 8. |
| Artamitios ΑΓΑΘΟΚΛΕΥΞ, L. T. 1 b.         | Hyakinthios ΑΡΙΞΤΕΙΔΑ, star on r., L. T. 1 b.     |
| Agrianios ΑΓΑΘΟΚΛΕΥΞ, S6-626.             | 4. Hyakinthios ΔΑΜΟΝΙΚΟΥ, S7 a.                   |
| Hyakinthios ΑΓΑΘΟΚΛΕΥΞ, L. T. 1 c room 3. | 5. Disthyos ΔΙΞΚΟΥ, S8-801.                       |
| Panamos ΑΓΑΘΟΚΛΕΥΞ, S3 f.                 | 6. Thesmophorios ΕΠΙΓΟΝΟΥ, S5 e.                  |
| Karneios ΑΓΑΘΟΚΛΕΥΞ, S6-626.              | Artamitios ΕΠΙΓΟΝΟΥ, S8 d.                        |
| 2. Thesmophorios ΑΓΗΞΙΛΑ, S5 e.           | 7. Dalios ΠΙΞΤΟΥ, arrow-head between, S11 y.      |
| Artamitios ΑΓΗΞΙΛΑ, S5 h.                 | 8. Agrianios ΤΟΛΞΙ(?)ΤΟΥ, S3 street cistern.      |
| Karneios ΑΓΗΞΙΛΑ, S6 f.                   |   |

## IV. ΕΠΙ WITH NAME OF PERSON IN GENITIVE

- |  |  |
|--|--|
| 1. ΑΡΧΕΜ ΒΡΟΤΟΥ, S11-13 sub. See Reg. No. 4899, above, page 311.                           | 23. ΕΥΚΡΑΤΟΥΞ, S9-940.   |
| 2. ΑΓΕΞΤΡΑΤΟΥ, with Helios-head on l., S3 e.   | 24. ΘΑΡΞΙ ΠΟΛΙΟΞ, Helios-head on l., S6 f.   |
| 3. ΑΓΗΞΙΠΠΟΥ, with Helios-head on l., S. G. T. 6; without symbol, S3 d, S11 y deep.        | 25. ΘΕΡ[ΞΑΝ]ΔΡΟΥ, see Reg. No. 4098, p. 311.   |
| 4. ΑΓΛ ΟΚΡΙΤΟΥ, with Helios-head on l., S5 c; without symbol (second line reversed), S3 d. | 26. ΘΕΞ ΤΟΡΟΞ, Helios-head on l., S3-311.  |
| 5. ΑΓΛΟΥ ΜΒΡΟΤΟΥ, S1 square cistern.   | 27. ΙΕ ΡΩΝΟΞ, torch and ring on l., S5 street.   |
| 6. ΑΙΝ ΗΤΟΡΟΞ, with Helios-head on l., S3 street cistern.                                  | 28. ΚΑΛΛΙ ΚΡΑΤΕΥΞ, Helios-head on l., S3 street cistern, S10 d.  |
| 7. ΑΙΞ ΧΥΛΙΝΟΥ, S8 e.  | 29. ΚΑΛΛΙ ΚΡΑΤΙΔΑ, bar below, S4-201.  |
| ΙΕΡΕΩΞΑΙΞΧΥΛΙΝΟΥ, circular, rose, S5 c.  | 30. ΜΥ? ΤΩΝΟC, S3-307.   |
| ΑΙΞΧΥ ΛΕΙΝΟΥ, S3 d.  | 31. ΝΙΚΑΞΑΓΟΡΑ, circular, dolphin, S5 b.   |
| 8. ΑΝΑΞ ΑΝΔΡΟΥ, S9 N.  | 32. ΞΕΝΟ ΞΤΡΑΤΟΥ, Helios-head on l., S3 c; without symbol, S3 c, S6 f, L. T. under calidarium.         |
| 9. ΑΡΑ ΤΟΦΑΝΕΥΞ, with Helios-head on l., S3-311, S3 street.                                | 33. ΞΕ ΝΟΦΑΝ, Helios-head on l., S3 d.   |
| 10. Α ΡΕΤΑ ΚΛΕΥΞ, S10 c.   | 34. ΞΕΝΟ ΦΑΝΕΥΞ, Helios-head on l., S10 b; wreath on l., S6 e; without symbol, S5 f (reversed), S10 c. |
| ΑΡΕΤΑ ΚΛΕΟΥΞ, L. T. 3-39.  | 35. ΠΑΥ ΞΑΝΙΑ, Helios-head on l., S3 a and c, S5 c; without symbol, S3 street cistern.                 |
| 11. ΑΡΙΞΤΕΙΔΑ, with Helios-head on l., S10 a.  | 36. ΠΕΙΘΙΑΔΑ, circular, with ΑΞΙΟΥ Δ in centre, S4-201.  |
| 12. ΑΡΙΞΤΕΩΞ, circular, rose, S10 c.   | 37. ΠΕΙΞΙ ΞΤΡΑΤΟΥ, Helios-head on l., S3-311, S5 b.  |
| 13. ΑΡΧΙΔΑΜΟΥ, L. T. 3 c 32 sub.   | 38. ΠΟΛΥ ΚΡΑΤΕΥΞ, Helios-head on l., S3 street, S5 e.  |
| 14. ΑΡΧΙΑΙΔΑ, with Helios-head on l., S10 b.   | 39. ΠΥΘΟ ΓΕΝΕΥC, S8-803.   |
| 15. ΑΡΧΟΚΡΑΤΕΥΞ, S5 h.   | 40. ΡΩΔΑ ΜΟΥ, S6 g.  |
| 16. ΔΑΗΜΩΝΟΞ, circular, rose (?), S4-351.  | 41. ΞΥΜ ΜΑΧΟΥ, Helios-head on l., N. G. T. 6.  |
| 17. ΔΑΜΟΘΕΜΙΟΞ, Helios-head on l., S3 c, L. T. 1 b; without symbol, Samarra c.             | 42. COCT ΡΑΤΟΥ, S6 f (cf. ΞΩΞΤΡΑΤΟΥ).  |
| 18. ΔΑΜ ΩΝΟΞ, S11-3 cistern.   | 43. ΞΩΞΤΡΑΤΟΥ, circular, rose, S10 b deep.   |
| 19. ΔΟΡ ---ΜΙΔΑ, S3 street cistern.  | 44. ΦΙ ΛΟΚΡΑ ΤΕΥΞ, Samarra's Land c.   |
| 20. ΕΥ ΔΩΡΟΥ, Helios-head on l., S6 e.   | 45. ΦΙΛ ΝΙΔΑ, Helios-head on l., S5 f, S6 d.   |
| 21. ΕΥ ΚΛΕΥΞ, S2 c, S9 N, L. T. 3 b under calidarium.                                      | 46. ΦΙΛΩΝΙΔΑ, without symbol, S3 d, S5 c.  |
| 22. ΕΥΚΡ ΑΤΙΔΑ, Helios-head on l., H. S. 2.  | 47. ΧΑΡ ΜΟΚΛΕΥΞ, Helios-head on l., S3 c; without symbol, S3 b, S6 e, L. T. E. b.                      |

## V. ΕΠΙ WITH NAME OF PERSON FOLLOWED BY NAME OF MONTH (BOTH IN GENITIVE)

1. ΑΓΕΣΤΡΑΤΟΥ, Thesmophorios (circular, rose), S2-69 sub; Sminthios (ΙΕΡΕΩΣ ΑΓ.), S3-302; Artamitios, S2-31, N. G. T. 5; Karneios, S7 b.
2. ΑΓΕΜΑΧΟΥ, Panamos, S3 f.
3. ΑΓΗΞΙΑΑ, Agrianios (circular, rose), S5 b.
4. ΑΘΑΝΟΔΟΤΟΥ, . . . (circular, rose), S3 street.
5. ΑΙΝΗΞΙΔΑΜΟΥ, Pedageitnyos (circular, rose), S5 c; Artamitios (circular, rose), S3-306; Hyakinthios, S2-28; Karneios, S3 f.
6. ΑΙΝΗΤΟ|ΡΟΣ, Dalios, L. T. 4 b 52.
7. ΑΙΞΙΧΙΝΑ, Thesmophorios, L. T. 1 d; Hyakinthios, S5 h.
8. ΑΙΞΙΧΥΛΙ, Agrianios, S8 c.
9. ΑΛΕΞΙΜΑΧΟΥ, Badromios, L. T. 5-53, L. T. E.; Agrianios, S6 b; Hyakinthios, S8-861, R. T.; Panamos, S3 c.
10. ΑΝΑΞΑΝΔΡΟΥ, Thesmophorios, S9 N; Panamos, L. T. 1 c.
11. ΑΝΔΡΙΑ, Thesmophorios, Gateway (1909).
12. ΑΝΔΡΟΝΙΚΟΥ, circular, rose, Panamos, S6 f.  
ΑΝΔΡΟΝ[ ], Pedageitnyos, S6 b.  
ΑΝΔΡΟ|ΝΕΙΚΟΥ, Dalios, S5 c.
13. ΑΝΘΙΞΙ|ΔΑΜΟΥ, Panamos, S2-32 sub.
14. ΑΡΑΤΟΦΑΝΕΥΣ, Badromios, L. T. 1 b; Hyakinthios, L. T. E., S11-1.
15. ΑΡΙΞΤΕΙΔΑ, Badromios, S3 c; Panamos, S11 z (circular, rose); Sminthios, S3 street cistern; Artamitios, S3 e, S11-13 cistern; Agrianios, S6 f, S11 y, S3 street cistern, Bas. 2d stratum.
16. ΑΡΙΞΤΟ|ΓΕΙΤΟΥ, Panamos, S5 e.
17. ΑΡΙΞΤΟΓΕΝΕΥΣ, Hyakinthios, S5 b and f; Panamos, L. T. 1 a and c.
18. ΑΡΙΞΤΟΔΑΜΟΥ, Badromios, circular, rose, S3 street; Panamos, S2 c, S6 a, S8 d.  
ΔΑΛΙΟΥ|ΕΠΙ ΑΡΙΞΤΟΔΑΜΟΥ, S10 d.
19. ΙΕΡΕΩΣ ΑΡΙΞΤΟΦΑΝΟΥ ΔΑΛΙΟΥ, circular, rose, S6 c.
20. ΑΡΙΞΤΟΚ|ΠΑΤΟΥ, Thesmophorios, S5 c.
21. ΑΡΙΞΤΟΜΑΧΟΥ, Agrianios, L. T. E., S3 c (circular, rose); Hyakinthios, S8 d (circular, rose); Panamos, S3 b, S11-8.
22. ΑΡΙΞ|ΤΟΝΒΡΟΤΙ|ΔΑ, Agrianios, H. S. 1.
23. ΑΡΙ|ΞΤΟΣΤΡΑΤΟΥ, Sminthios, S3 e, Gateway N.
24. ΑΡΙΞΤΩΝΙΔΑ, circular, rose, Hyakinthios, S3 b street; Panamos, S3 c.
25. ΑΡΙΞ|ΤΩΝΟΣ, Thesmophorios, S10 e; Agrianios, S6 f; month name off, N. G. T. 8.
26. ΑΡΜΟΣΙΑΑ, Thesmophorios, S3 d, S3-321; Agrianios (circular, rose), S5 h.
27. ΑΡΧΙΒΙΟΥ, Agrianios, S2-70 street (circular, rose); Panamos, S11 y.
28. ΑΡΧΙΔΑ, Panamos, S3 g (circular, rose).
29. ΑΡΧΙΔΑΜΟΥ, Panamos, S2-63 (1909).
30. ΑΡΧΙΛΑΙΔΑ, Sminthios, S10 b, S8 b (-250 cm.); Artamitios, S3 a; Panamos, S2-32 sub (circular, rose).
31. ΑΡΧΙΜΙΔΑ, Hyakinthios, S10 b deep.
32. ΑΡΧΙΝΟΥ, Artamitios, L. T. 52; Panamos, S10 c;  
ΕΠΙ ΑΡΧΕ|ΙΝΙΟΥ ΠΥΝ|ΥΟΜΑ, L. T. 5 b.
33. ΑΡΧΟΚΡΑΤΕΥΣ, Thesmophorios, S5 h.
34. ΑΞΤΥΜΗ, Sminthios, H. S. 1 deep (circular, rose).
35. ΑΞΤΥΜΗ|ΔΕΥΣ, Hyakinthios, S5 c.
36. ΑΥΤΟΚΡΑΤΕΥΣ, Hyakinthios, S10 surface dump; Dalios, S5 c (circular, rose).
37. ΙΕΡΕΩΣ|ΓΟΡΓΩΝΟΣ, Panamos, S3 street cistern.  
ΓΟΡ|ΓΩΝΟΣ, Dalios, S12 dump (1908).
38. ΔΑΜΑΙΝΕΤΟΥ, Hyakinthios, S5 f (circular, rose); Panamos, S6 c, S3 a (circular, rose). Dalios, S3 f (circular, rose).  
ΙΕΡΕΩΣ ΔΑΜΑΙΝΕΤΟΥ, Hyakinthios, S5 a.
39. ΔΑΜΟΘΕΜΙΟΣ, Badromios, N. Gateway (1909) (circular, rose).
40. ΔΑΜΟΚΛΕΥΣ, Panamos, S4-360; illegible, S3 street cistern.
41. ΔΑΜΩΝΟΣ, Artamitios, N. G. T. 5.
42. ΕΠΙΔΑΜΟΥ, Hyakinthios, L. T. E.
43. ΕΥΑΝΔΡΟΥ, Dalios, Gateway E (1909).
44. ΕΥΔΑΜΟΥ, Hyakinthios, S5 c; Dalios, S2 above S. wall of temple.
45. ΕΥΚΛΕΥΣ, Artamitios, S5 b (leaf between), Samarra's Land; illegible, L. T. E.
46. ΗΡΑΓΟΡΑ, Disthyos, S4-334; Agrianios, S5 e (2).
47. ΘΑΝΑΔΟΤΟΥ, Artamitios, S. G. T. 1; Hyakinthios, S3 street.
48. ΘΑΡΞΙΠΟΛΙΟΣ, Panamos-Deut., S5 h; Panamos, Samarra b (reversed).
49. ΘΕΑΙΔΗΤΟΥ, Sminthios, N. G. T. 7; Agrianios, L. T. 1 cave 3.
50. ΘΕΡΞΑΝΔΡΟΥ, Agrianios, S5 c.
51. ΘΕΞΤΟΡΟΣ, Illegible, S5 a.
52. ΙΕΡΩΝΟΣ, Badromios, S5 d; Hyakinthios S5 c; Panamos, L. T. 39.
53. ΚΑΛΛΙΚΡΑΤΕΥΣ, Thesmophorios, S3 street cistern; Artamitios, S3 street, S3 e (circular, rose); Hyakinthios, S3 street; Panamos, S5 d (circular, rose).
54. ΚΑΛΛΙΚΡΑΤΙΔΑ, Agrianios, S3-320; Karneios, S3 street cistern.
55. ΚΑΕΙΤΟΜΑΧΟΥ, Badromios, S5 Tower (circular, rose); Dalios, S8 b (circular, rose).
56. ΚΑΕΩΝΥΜΟΥ, Panamos-Deut., S10 d.
57. ΚΑΕΥΚΡΑΤΕΥΣ, Thesmophorios, S6 c cistern; Hyakinthios, N. Gateway (1909).
58. ΚΑΗΝΟΣΤΡΑΤΟΥ, Panamos, S3 a.
59. ΚΡΑΤΙΔΑ, Pedageitnyos, S8-803.
60. ΜΕΝΩ|ΝΟΣ, Sminthios, N. G. T. 12.
61. ΜΥΤΙΩΝΟΣ, Artamitios, S. G. T. 2 (circular, rose); Hyakinthios, L. T. E. d (circular, rose); Dalios, Bas. N. E. sub (circular, rose).
62. ΝΙΚΑΣΑΓΟΡΑ, Thesmophorios, circular, rose, S2 middle, S8-803; Panamos, S3 street (circular, rose), S2-28 (rectangular, reversed); Agrianios, S5 c (rectangular, frame); Dalios, S8-803 (circular, rose).
63. ΞΕΝΟΦΑΝΕΥΣ, Pedageitnyos, S10 d.
64. ΞΕΝΟΦΑΝΤΟΥ, Thesmophorios, S6 c (spray in lower r. corner), S6 b; Sminthios, S10 e; Agrianios, L. T. 5 a.

65.  $\Xi\epsilon\eta\phi\omega\eta\tau\omicron\varsigma$ , Sminthios, S2-31 sub; Artamitios, S6 h; Agrianios, S5 a, vault cistern 1 (circular, rose); Hyakinthios, S6 a; Panamos, circular, rose, N. G. T. 6, S. G. T. 3.
66.  $\omicron\pi\iota\omega\eta\tau\omicron\varsigma$ , Hyakinthios, L. T. 39.
67.  $\pi\alpha\upsilon\varsigma\alpha\eta\iota\alpha$ , Badromios, S8 b; Artamitios, S5 b; Hyakinthios, S3 street cistern, S2-29 sub; Panamos, S5 h, S. G. T. 2; Dalios, S6 f, S5 d; illegible, S5 c, H. S. 1 (circular, rose).
68.  $\pi\epsilon\iota\varsigma\alpha\gamma\omicron\pi\alpha$ , Sminthios, Bas. N. E. sub.
69.  $\pi\epsilon\iota\varsigma\iota\varsigma\tau\pi\alpha\tau\omicron\upsilon$ , Dalios, vault cistern 1.
70.  $\pi\omicron\lambda\upsilon\alpha\pi\alpha\tau\omicron\upsilon$ , Pedageitnyos, H. S. 1; Artamitios, S5 d, S6 g (sub-stamp); Agrianios, S4 b; Panamos, L. T. 1 e.
71.  $\pi\omicron\lambda\upsilon\kappa\pi\alpha\tau\omicron\upsilon\varsigma$  (sic!), Hyakinthios, S3-314 (circular, rose).
72.  $\pi\upsilon\theta\omicron\gamma\epsilon\eta\epsilon\upsilon\varsigma$ , Thesmophorios, S3 e and f; Badromios, L. T. 5 b; Agrianios, S11-1 sub; Hyakinthios, S3 street, S5 c, d and e, L. T. 5 b; Panamos, S4-361; Dalios, L. T. 1 a; Karneios, S3 a.
73.  $\pi\upsilon\theta\omicron\delta\omega\pi\omicron\upsilon$ , Pedageitnyos, S5 a; Sminthios, S. G. T. 1; Agrianios, L. T. 4-46.
74.  $\pi\eta\gamma\omega\eta\tau\omicron\varsigma$ , illegible, S2 SE corner temple.
75.  $\varsigma\iota\kappa\pi\alpha\tau\epsilon\upsilon\varsigma$ , Pedageitnyos, L. T. E. (read  $\iota\varsigma\iota\kappa\pi\alpha\tau\epsilon\upsilon\varsigma$ ).
76.  $\varsigma\eta\delta\alpha\mu\omicron\upsilon$ , Badromios, S3 e; Artamitios, S10 c; Hyakinthios, S8 d;
- $\epsilon\pi\iota\varsigma\eta\delta\alpha\mu\omicron\upsilon$  |  $\pi\alpha\eta\alpha\mu\omicron\upsilon$  |  $\delta\epsilon\upsilon\tau\epsilon\pi\omicron\upsilon$ ], and on the other handle  $\varsigma\eta\kappa\pi\alpha\tau\epsilon\upsilon\varsigma$ , with torch on the r., S2 cistern 14, Sept. 2, 1909.
77.  $\varsigma\upsilon\mu\mu\alpha\chi\omicron\upsilon$ , Hyakinthios, S11-1 deep.
78.  $\varsigma\eta\varsigma\iota\kappa\lambda\epsilon\upsilon\varsigma$ , Thesmophorios, S11-1 sub; Sminthios, S6 f; Hyakinthios, L. T. 5 south of apsidal structure, S10 a (circular, rose).
79.  $\varsigma\eta\varsigma\tau\pi\alpha\tau\omicron\upsilon$ , Sminthios, S3 street cistern; Artamitios, S3 street cistern.
80.  $\tau\epsilon\iota\mu\alpha\gamma\omicron\pi\alpha$ , Sminthios, S6 i; Dalios, S3 f.
81.  $\tau\epsilon\iota\varsigma\alpha\mu\epsilon\eta\omicron\upsilon$ , Sminthios, S5 d; Artamitios, S5 b (circular, rose); Panamos, S5 f; illegible, L. T. E. a.
82.  $\tau\iota\mu\alpha\varsigma\alpha\gamma\omicron\pi\alpha$ , Thesmophorios, L. T. 1 c; Sminthios, S2-29 sub (circular, rose); Hyakinthios, S2 South (circular, rose); Panamos, S5 a, S6 f.
83.  $\tau\iota\mu\omicron\delta\iota\kappa\omicron\upsilon$ , Agrianios, S5 f (lozenge-shaped with symbol below); Hyakinthios, S3 f, S11 z, S5 f (circular, rose).
84.  $\tau\iota\mu\omicron\theta\epsilon\omicron\upsilon$ , Hyakinthios, N. G. T. 8; Panamos, S7 c, S8-803 (circular, Helios-head, with sub-stamp); Dalios, S2-63.
85.  $\tau\iota\mu\omicron\upsilon\pi\omicron\delta\omicron\upsilon$ , Hyakinthios, S3 street; Panamos, S3 corner cistern, S5 a (circular, rose); Sminthios, S3-307 (circular, rose).
86.  $\tau\iota\varsigma\alpha\gamma\omicron\pi\alpha$ , Sminthios S6 e.
87.  $\phi\iota\lambda\omicron\delta\alpha\mu\omicron\upsilon$ , Hyakinthios, H. S. 1; Dalios, S3 street; uncertain, S3 street.
88.  $\chi\alpha\pi\mu$  [OKAEY], illegible, Cl. T. (circular, rose).

## VI. MONOGRAM STAMPS





## a. AS SUB-STAMPS

With two exceptions (Nos. 1 and 14 below), the sub-stamp occurs with circular rose stamps. It was stamped on the lower part of the upper attachment of the handle before baking.

- | Sub-stamp.                       | Upper stamp.   | Sub-stamp.                 | Upper stamp.   |
|----------------------------------|--|----------------------------|--|
| 1. $\boxed{\Upsilon\pi\omicron}$ | $\mu\iota\delta\alpha$ with bunch of grapes on r. and caduceus below, I 54, found in S5 a.   | 8. $\boxed{\kappa}$        | $\epsilon\pi\iota\alpha\upsilon\tau\omicron\kappa\pi\alpha\tau\epsilon\upsilon\varsigma\delta\alpha\lambda\iota\omicron\upsilon$ , circular, rose, S5 c.                             |
| 2. $\boxed{\Upsilon-}$           | $\iota\pi\pi\omicron\kappa\pi\alpha\tau\epsilon\upsilon\varsigma$ , circular, rose, I 47, found in S3 a.   |                            | $\epsilon\pi\iota\delta\alpha\mu\alpha\iota\eta\eta\tau\omicron\upsilon\upsilon\alpha\kappa\iota\eta\theta\iota\omicron\upsilon$ , circular, rose, S5 f w.                           |
| 3. $\boxed{\iota\varsigma-}$     | $\alpha\pi\iota\varsigma\tau\omicron\kappa\lambda\epsilon\upsilon\varsigma$ , circular, rose, I 15, found in S4 e.   | 9. $\boxed{\eta\varsigma}$ | $\epsilon\pi\iota\pi\omicron\lambda\upsilon\alpha\pi\alpha\tau\omicron\upsilon\alpha\pi\tau\alpha\mu\iota\tau\iota\omicron\upsilon$ , circular, rose, S6 g 3.                        |
| 4. $\boxed{\theta\alpha}$        | Illegible, circular, rose, N. G. T. 6.<br>Illegible, circular, rose, S4 d.<br>Illegible, circular, rose, S6 i.   |                            | $[\epsilon\pi\iota\tau\iota]\mu\omicron\theta\epsilon\omicron\upsilon\pi\alpha\eta\alpha\mu\omicron\upsilon$ , circular, rose, S8-803.   |
| 5. $\bigcirc\alpha\bigcirc$      | ----- $\epsilon\eta\epsilon\upsilon\varsigma\delta\epsilon\upsilon$ ---, circular, rose, S5 d.   | 10. $\boxed{\text{III}}$   | $\epsilon\pi\iota\pi\omicron\lambda\upsilon\alpha\pi\alpha\tau\omicron\upsilon\pi\epsilon\tau\alpha\gamma[\epsilon\iota\tau\eta\upsilon\omicron\upsilon]$ , circular, rose, H. S. 1. |
| 6. $\boxed{\epsilon\phi}$        | $\epsilon\pi\iota$ ----- $\alpha\eta\alpha\mu\omicron\upsilon\delta\epsilon\upsilon\tau\epsilon\pi\omicron\upsilon$ , circular, rose, found in S10 a.                          | 11. $\boxed{\text{田}}$     | ---- $\varsigma\tau\omicron\kappa\eta\pi$ ---, circular, rose, S3 f.   |
| 7. $\boxed{\eta}$                | $\epsilon\pi\iota\alpha\pi\iota\varsigma\tau\omicron\delta\alpha\mu\omicron\upsilon\beta\alpha\tau\pi\omicron\mu\iota\omicron\upsilon$ , circular, rose, found in S3 street w. | 12. $\bigcirc\text{A}$     | Illegible, circular, rose, S11-8.  |
|                                  |  | 13. Illegible.             | Illegible, circular, rose, S1 above basins.  |
|                                  |  | 14. $\boxed{\text{A}}$     | $\epsilon\upsilon\phi\pi\alpha\eta\omicron\pi\omicron\varsigma$ , circular, Helios-head, S6 a.   |

## b. AS THE ONLY STAMP

When used alone the monogram stamp is usually placed on the top of the handle.




- |   |  |
|---|--|
| 15.  Reg. No. 3365, S5 street, July 7, 1910. | 17.  Underneath, Reg. No. 3696, L. T. E. July 30, 1910. |
| 16.  Reg. No. 4174, S8-801 S, Sept. 1, 1910. | 18.  Illegible. Reg. No. 3241, S5 c, July 1, 1910.      |

## C. TWIN-HANDLES

The handles made of two adhering parallel strands of clay sometimes have two stamps, one on each strand. As no whole jars were found, it is not possible to say whether the opposite twin handle was also stamped or not. The left hand strand as you look towards the neck is A and the right B.

- |  |  |
|--|--|
| 1. A. $\Omega\eta\text{[A]}\tau\rho\omicron\upsilon$ , Reg. No. 4011, S7-357 sub, Aug. 20, 1910.<br>B. $\Lambda\text{I}$ ----- | 8. A. $\epsilon\rho\mu\text{I}\alpha\epsilon$ , Reg. No. 4093, S9, Aug. 24, 1910.<br>B. $\epsilon\gamma\text{I}\gamma\epsilon\epsilon\alpha$ |
| 2. A. $\Omega\eta\text{A}\tau\rho$ --, with a club above, Reg. No. 3567, S6 e E, July 21, 1910.<br>B. Blank.                   | 9. A. $\beta\omicron\gamma\rho\upsilon$ , Reg. No. 3134, S5 a, June 29, 1910.  |
| 3. A. $\epsilon\alpha\tau\upsilon$ , Reg. No. 3550, S6 h, July 19, 1910.<br>B. A club in a rectangle.                          | 10. A. $\theta\text{I}\eta\epsilon\omega\eta\text{[M]}$ , Reg. No. 4854, S11-22 black dirt, Oct. 13, 1910.                                   |
| 4. A. $\beta\alpha\beta\alpha\epsilon\upsilon$ , with a club below, Reg. No. 4780, S11-1 S, Oct. 8, 1910.                      | 11. A. $\epsilon\epsilon\eta\omicron$ , Reg. No. 4591, S8-811, Sept. 20, 1910.   |
| 5. A. $\text{IKAC}\omicron\upsilon$ , with a club (?) below, Reg. No. 2244, S5 e, north of Greek Fort Wall, Sept. 28, 1910.    | 12. A. $-\omicron\alpha\text{I}\phi\omicron\tau\tau-$ (reversed?) Reg. No. 3635, S6 c, July 26, 1910.  |
| 6. B. $\pi\alpha\rho$ club $\epsilon$ , Reg. No. 3538, S5 e, July 18, 1910.  | 13. B. $\kappa\ast\text{IVI}$ , Reg. No. 2205, S3 e, Sept. 21, 1909.   |
| 7. A. -- $\pi\alpha\tau\rho\omicron\upsilon$ , and a second line, Reg. No. 2923, S2 III 67, June 21, 1910.<br>B. $\text{[A]}$  | 14. A. Palm leaf. Reg. No. 3650, S6 b, July 27, 1910.  |
|  | 15. B. Figure of a man. Reg. No. 2445, S3 b between street walls, Oct. 6, 1909.  |

## D. FLAT HANDLES, COARSE WARE

- |   |  |
|---|--|
| 1. $\epsilon\pi\text{I}\epsilon\eta\omicron\kappa\text{I}\omicron$ , Reg. No. 4889, S11, N of middle, Oct. 17, 1910.<br>$\upsilon\sigma\kappa\lambda\epsilon\upsilon\pi\omicron\alpha\text{I}$ ,<br>$\omicron\sigma\kappa\eta\text{I}\delta\text{I}\omega-$ , | 8. $\epsilon\upsilon\alpha\eta$ , Reg. No. 2323, S3 d, Oct. 11, 1909.<br>$\theta\omicron\upsilon$ ,<br>leaf  |
| 2. $\text{I}\epsilon\tau$ --- $\upsilon\tau\omicron\upsilon$ , Reg. No. 2208, S3 e, Sept. 23, 1909.<br>vase<br>$\alpha\rho\text{TEMI}\alpha\delta\text{I}$ ,<br>$\mu\epsilon\eta\omega$ --- $\upsilon$ ,  | 9. $\pi\upsilon\theta\text{I}\omicron\upsilon$ , Reg. No. 2177, S3 b NE low, Oct. 5, 1909. Inscription reversed.                                     |
| 3. $\eta\upsilon\sigma\text{I}\omicron\upsilon$ , Reg. No. 2028, L. T. 3 a-39, Sept. 8, 1909. Inscription reversed.<br>$\eta\text{I}$<br>$\phi\text{I}\alpha\alpha\text{I}$ ,   | 10. $\delta\text{I}\omicron\eta\omicron\upsilon$ , Reg. No. 2344, S3 street E sub, Oct. 13, 1909. Inscription reversed.                              |
| 4. $\phi\text{I}\alpha\text{I}\text{C}\text{I}\omicron\text{C}$ , Reg. No. 4665, S8-880, Sept. 26, 1910.<br>paddle<br>$\theta\alpha\text{C}\text{I}\omega\eta$ ,  | 11.  Reg. No. 3401, L. T. E. a, July 9, 1910.                   |
| 5. $\theta\text{I}\alpha\epsilon\text{I}\omega\eta$ , Reg. No. 3695, S4-327 sub, July 30, 1910.<br>tripod<br>$\text{I}\epsilon\omicron\alpha\text{I}\kappa\omicron\epsilon$ ,   | 12.  Reg. No. 3546, S6 a, July 19, 1910. Shaded part illegible. |
| 6. $\theta\text{I}\alpha\text{C}\text{I}\omega\eta$ , Reg. No. 3457, S4-347 sub, July 13, 1910.<br>leaf<br>$\alpha\text{I}\gamma\epsilon\tau\rho\alpha\tau\omicron$ ,   | 13. Pomegranate in a circle, Reg. No. 3308, S5 d, July 4, 1910.  |
| 7. $\alpha\rho\text{I}\epsilon\tau\omicron$ , Reg. No. 2242, S3 c, Sept. 28, 1909.<br>$\gamma\epsilon\eta\epsilon\upsilon\epsilon$ ,  | 14.  Reg. No. 3630, S6 e, July 26, 1910.                        |
|   | 15. Illegible. Reg. No. 2287, S3-310, Oct. 6, 1909.  |
|   | 16. $\text{[EY]}$ Reg. No. 2720, Cl. T., Aug. 14, 1909.  |
|   | 17. $\text{[EZ]}$ Reg. No. 2270, S3-311, Oct. 6, 1909.   |

## E. ROUND HANDLES, COARSE WARE, LATIN AND GREEK INSCRIPTIONS

- |  |   |
|--|---|
| 1. $\text{[AN]}$ Reg. No. 4392, S9-906 sub, Sept. 6, 1910.   | 3. $\text{[PHORI]}$ Reg. No. 4507, S8 d, Sept. 15, 1910.    |
| 2. $\text{[IM]}$ Reg. No. 4902, S11-15 behind Herodian wall. | 4. $\text{[EPOL]}$ Reg. No. 2719, Cl. T., Aug. 14, 1909.    |
|  | 5. $\text{[Q-ALL]}$ Reg. No. 4847, S10-1001, Oct. 12, 1910. |

## F. ARRETINE STAMPS (See p. 304 II)

## CHAPTER V

### LAMPS

Lamps, like all household utensils of potter's ware, were found in abundance, some broken, some whole, and almost all with wick-blackened spouts. The first great division is between the open (or saucer) lamps and the closed lamps. All the Israelite and most of the Babylonio-Grecian lamps are saucer lamps. The closed lamp appears first in a Greek ware of fine red paste with a lustrous black glaze (see Pottery in cistern 7, strip 1, p. 290 ff., above) and then in a local fabric, of fine red ware wet-smoothed, showing forms similar to the Greek. All of these were made on the wheel. The next change was the introduction of molded lamps, made in two halves, top and bottom, and stuck together before washing or glazing. These molded lamps repeat with certain changes of form the various classes of pottery, black-glazed gray paste, black-glazed red paste, Greek red-glazed wares, and Roman red-glazed wares. The most marked change of form came in the Roman period with the sunk top and the flat circular body having a very short spout (see Fig. 187). These lamps seem to be of foreign manufacture. The local wares appear to have developed in unbroken course from the molded, glazed wares into a series of molded, unglazed lamps (see Figs. 199-201), which ended finally in the egg-shaped lamps of the late Roman period. These egg-shaped lamps were found with coins of the Fourth and Fifth Centuries A.D. in the second stratum at the Basilica, in the Roadway Trench, and elsewhere. Possibly they extend into the Arab period, but certainly they were made as early as the Fourth or Fifth Century A.D.

#### A. SAUCER LAMPS

The saucer lamps belong to the Israelite and the Babylonio-Grecian period. The general change from rimless, round-bottomed saucers to flat-rimmed, flat-bottomed saucers noted by Professor Macalister as occurring from the Israelite to the Persian period seems borne out by our scanty material. The change of form would be due, of course, to the desire for a lamp which would not spill the oil. The half-closed lamp with its higher form (No. 5, below) might well be a continuation of the development in this direction, but it is a comparatively rare form and not exactly dated. The whole process of the development of the saucer lamp at Samaria was suddenly broken off by the introduction of the high closed lamps of Greek manufacture, which offered at once a form free from all the disadvantages of the best saucer lamp. The local potteries began to turn out wet-smoothed lamps of the Greek form, and the saucer lamps ceased to be used.

1. Saucer lamp with roll rim and single spout (Israelite period). Red ware, black core, red wash.

a. Reg. No. 3709, S4-341 sub, yellow debris, Aug. 2, 1910.

b. Reg. No. 2601, S4 b W, Oct. 23, 1909.

2. Saucer lamp of hollow form, with two spouts. Red ware.

a. Dis. No. 1677, Bas. N, Aug., 1909.

3. Saucer lamp with seven spouts on a hollow stand.  
Brown ware, red wash.

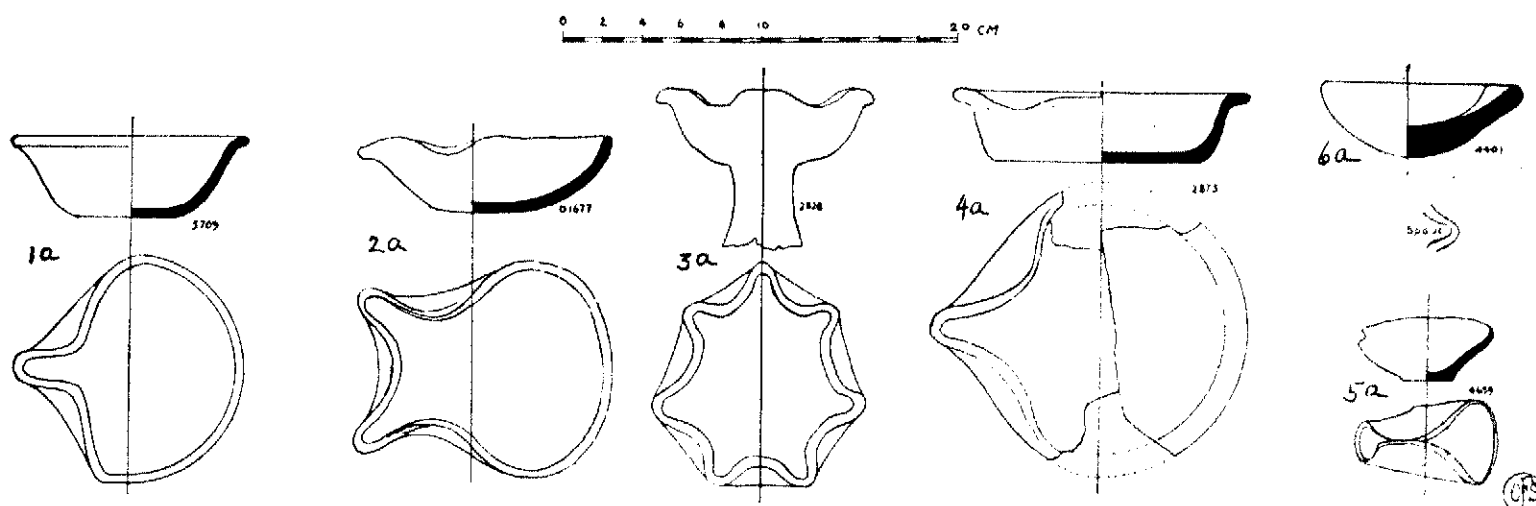
a. Reg. No. 2828, N. G. T. 5, June 6, 1910.

b. Reg. No. 3545, S5 f, July 18, 1910.

b. Reg. No. 3545, S5 f, July 18, 1910.

c. Dis. No. 2163, S1 cistern 7, July 4, 1910.

5. Half-closed saucer lamp, high form, fine drab ware (soft).



187. Saucer lamps. Scale, 1:4.

4. Saucer lamp with flat horizontal rim and single spout. Drab ware, red wash.

a. Reg. No. 2873, N. G. T. 5, June 6, 1910.

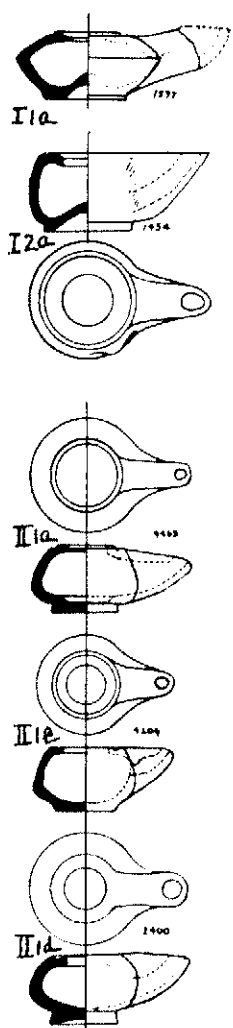
a. Reg. No. 4659, S10 d, Sept. 26, 1910.

6. Crucible or lamp. Crude gray ware (mud).

a. Reg. No. 4401, S9-913 sub, Sept. 6, 1910.

## B. GREEK LAMPS

- I. Turned lamp, fine, reddish paste, lustrous black glaze (worn), long spout, top of spout flat, level with top of body.



188. Greek lamps, types I and II 1. Scale, 1:4.

1. Without handle or knob, high form.

a. Reg. No. 1577, S2 S, July 30, 1909.

2. With plain knob on r., high form.

a. Reg. No. 1454, S1 N, June 4, 1909.

3. Like 2, without knob.

a. Reg. No. 3347, S5 e, July 6, 1910. See Pl. 81 a.

b. Reg. No. 2953, gray clay (?), S. G. T. 7, June 22, 1910.

c. Dis. No. 2165, S1 cist. 7, July 4, 1909.

- II. Like I, red wash or uncolored.

1. Without knob, wet-smoothed.

a. Reg. No. 4465, S7-755, Sept. 12, 1910.

b. Reg. No. 4466, S7-755, Sept. 12, 1910.

c. Reg. No. 4204, S8 b (-240 cm.), Sept. 3, 1910.

d. Reg. No. 2400, S3 e S of Greek Fort Wall, Sept. 28, 1909. See Pl. 81 b.

e. Reg. No. 2886, S. G. T. 4, June 21, 1910.

f. Dis. No. 5, S1 N, June 4, 1909.

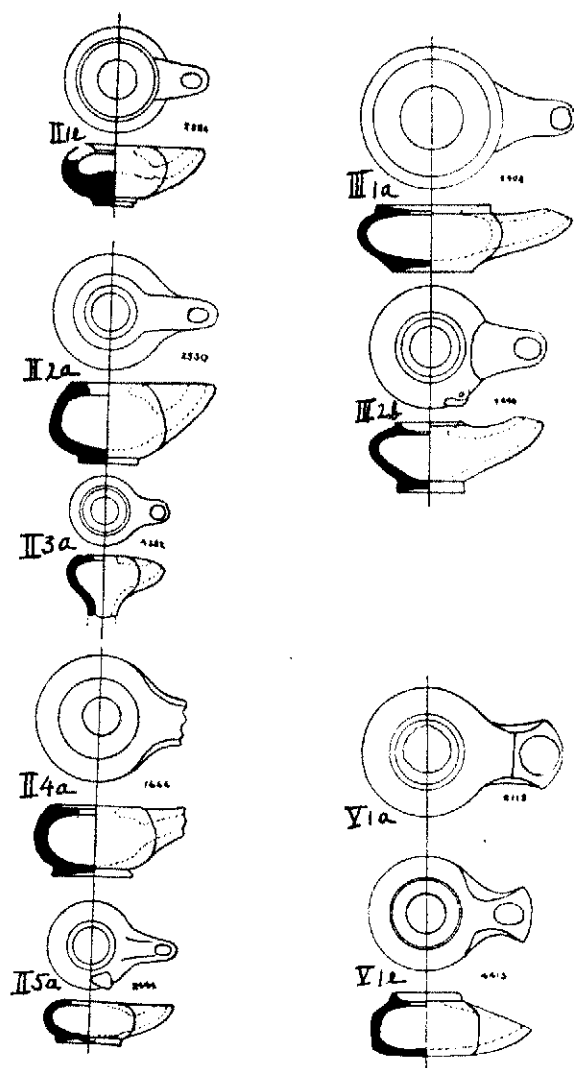
2. Same as 1, but with red wash.

a. Reg. No. 2530, L. T. 5-53-54 cist., Oct. 13, 1909.

3. Small lamp like 2, red wash, but was part of a stand, perhaps a large hollow tube in ring form with a number of such small lamps set at intervals.

a. Reg. No. 4382, S8 751, Sept. 6, 1910.





189. Types II 1 to 5.  
Scale, 1:4.

190. Greek lamps, types  
III and V. Scale, 1:4.

4. Same as 1, but with burnished red wash.
  - a. Reg. No. 1666, S2-51, Sept. 2, 1909.
5. Flat form, with knob on r., red wash.
  - a. Reg. No. 2444, S3 between street walls, Oct. 7, 1909.
  - b. Reg. No. 4043, vault cistern 1, Sept. 7, 1909.

### III. Similar to I and II, with top of spout slightly concave, red paste, wet-smoothed or with red wash.

1. Without knob, wet-smoothed.
  - a. Reg. No. 4408, S7 cist. 2, Sept. 7, 1910. See Pl. 81 c.
2. With knob with pin-hole on r., red wash.
  - a. Reg. No. 3251, S5 f, July 2, 1910.
  - b. Reg. No. 4446, Samarra a, Sept. 9, 1910. See Pl. 81 d.
  - c. Reg. No. 4834, S11-1, Oct. 11, 1910.

### IV. Turned lamp, with barbed spout.

1. Gray ware.
  - a. Reg. No. 3411, S5 h W, July 9, 1910. See Pl. 81 e.

### V. Turned lamp, with spatulated spout.

1. Red paste, wet-smoothed, no handle.
  - a. Reg. No. 2115, L. T. 1-12, Sept. 24, 1909. See Pl. 81 f.
  - b. Reg. No. 3159, N. G. T. 4, June 29, 1910.
  - c. Reg. No. 3429, L. T. 3 c, July 11, 1910.
  - d. Reg. No. 3779, S7 a, Aug. 6, 1910.
  - e. Reg. No. 4413, S7 cistern 3, Sept. 8, 1910.

## C. HELLENISTIC LAMPS

### I. Molded lamp, gray ware, black slip, ornamented with relief pattern, long spout (except No. 9).

1. With two side scroll-knobs and lance-head handle.
  - a. Reg. No. 3226, S5 b, July 1, 1910. See Pl. 81 g.
2. With scroll-knob on l. side, and ring-handle.
  - a. Reg. No. 1460, S1 II 12, June 7, 1909.
3. With scroll-knob on each side, no handle.
  - a. Reg. No. 2155 (bead pattern around mouth), S3 b SE, Oct. 4, 1909.
  - b. Reg. No. 2117, L. T. 4-52 sub, Sept. 24, 1909.
4. With scroll-knob on r., swelling on l., no handle.
  - a. Reg. No. 2398, S3 g N, Sept. 27, 1909. See Pl. 81 h.
5. With one scroll-knob on l., no handle, various patterns.
  - a. Reg. No. 2415, S3 f N above Greek Fort Wall, Oct. 2, 1909. See Pl. 81 k.
6. With scroll-knob on r., no handle.
  - a. Reg. No. 2408, S3-311 mixed debris, Sept. 30, 1909. See Pl. 81 l.
  - c. Reg. No. 2137 (pointed leaves in circle around mouth), S3 c, Sept. 21, 1909.
7. With rude knob on r., no handle, various patterns.
  - a. Reg. No. 2401, S3 d, Sept. 27, 1909. See Pl. 81 n.
  - b. Reg. No. 1841, H. S. 1 black stratum, July 22, 1909.
  - c. Reg. No. 3298, S4-351, July 4, 1910.
  - d. Reg. No. 2907 (mouth-rim different), S2-7, June 21, 1910.

8. With rude knob on r., no handle, cow's head on base of spout.

- a. Reg. No. 2419, S3 f N above Greek Fort Wall, Oct. 2, 1909. See Pl. 81 j.
- b. Reg. No. 3230, S5 e, July 1, 1910.
- c. Reg. No. 3886 (crater on base of spout), S6 h, Aug. 15, 1910.

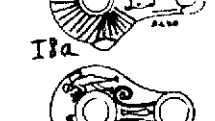
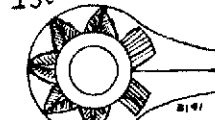
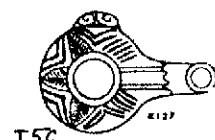
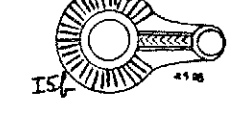
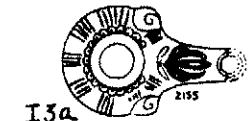
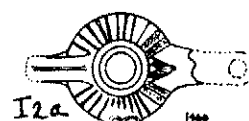
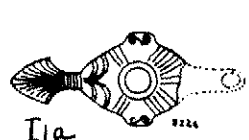
b. Reg. No. 2399, S3 f S, Sept. 27, 1909.

c. Reg. No. 1842, H.S. black stratum, July 22, 1909.

d. Reg. No. 3277, S5 e, July 2, 1910. See Pl. 81 o.

e. Reg. No. 4165, S10 c, Aug. 31, 1910.

11. Without knob or handles, line pattern, double ring around mouth, short spout.



191. Hellenistic lamps, types I 1-5b. Scale, 1:4.

192. Hellenistic lamps, types I 5c-9. Scale, 1:4.

193. Hellenistic lamps, types I 10-12. Scale, 1:4.

9. Without knob or handle, volute pattern on spout, a Cupid in relief on each side of mouth.

- a. Reg. No. 4492, S9 north of Greek Fort Wall, Sept. 13, 1910.

a. Reg. No. 1724, vault cistern 2, Aug. 21, 1909.

b. Reg. No. 2116, L. T. 1-12, Sept. 24, 1909.

10. Without knob or handle, various patterns.

- a. Reg. No. 1738, vault cistern 2, Aug. 24, 1909.

12. Lamp with nozzles around a circular body.

a. Reg. No. 4062, N. G. T., July 31, 1909.

b. Reg. No. 3170, N. G. T. 6, June 30, 1910. See Pl. 81 p.

## II. Molded lamp, red ware, red wash, forms like C I, above.

1. With scroll-knob on r., no handle, ring-base.

- a. Reg. No. 2176, S3 b NE below Greek floor, Oct. 5, 1909.
- b. Reg. No. 3730, S4-356 cistern 1, Aug. 4, 1910.
- c. Reg. No. 1959, L. T. 1 b cave 3, Aug. 27, 1909.
- d. Reg. No. 3585, S6 c, July 21, 1910.

b. Reg. No. 3335, S5 e, July 5, 1910.

c. Reg. No. 3372, S5 Greek Fort Wall, July 7, 1910.

d. Reg. No. 3422, S5 h W, July 11, 1910.

e. Reg. No. 2418, S3 f N above Greek Fort Wall, Oct. 2, 1909. See Pl. 81 i.

f. Reg. No. 2910, S2-7, June 21, 1910.

g. Reg. No. 3185, S5 b, June 30, 1910. See Pl. 81 q.

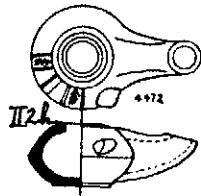
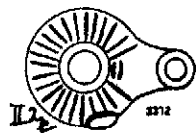
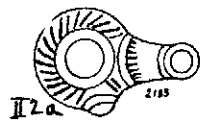
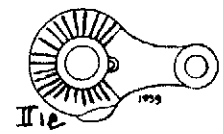
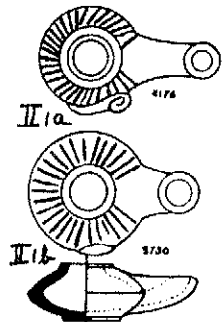
h. Reg. No. 4472, S8 b between walls, Sept. 12, 1910.

2. With rude knob on r. side.

- a. Reg. No. 2135, S3 c, Sept. 18, 1909.

## 3. With swelling on r. side.

- a. Reg. No. 4410, S7 cistern 2, Sept. 7, 1910.
- b. Reg. No. 4411, S7 cistern 2, Sept. 7, 1910.



194. Hellenistic lamps, types II 1-2. Scale, 1: 4.

## 4. Without knob, varying patterns.

- a. Reg. No. 1749, vault cistern 2, Aug. 25, 1909.
- b. Reg. No. 3821, S7 c, Aug. 9, 1910.
- c. Reg. No. 3823, S7 c, Aug. 9, 1910.
- The following have a broad rim around mouth:
- d. Reg. No. 3851, S7 cistern 2 (stair), Aug. 10, 1910.
- e. Reg. No. 3857, S7 Atrium House NE, Aug. 11, 1910.
- f. Reg. No. 4152, S7 cistern 4, Aug. 30, 1910.
- g. Reg. No. 3423, S5 h W, July 11, 1910.

## 5. With a rude knob on each side, short spout.

- a. Reg. No. 4412, S7 cistern 2, Sept. 7, 1910.

## 6. Gray paste.

- a. Reg. No. 2605, S4 f, Oct. 27, 1909.

## III. Molded lamp, with spear-shaped nozzle and ring-handle.

- 1. Gray ware, black glaze.

- a. Reg. No. 4409, S7 cistern 2, Sept. 7, 1910. See Pl. 81 u, and Fig. 196.

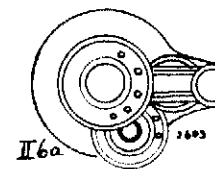
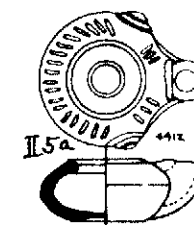
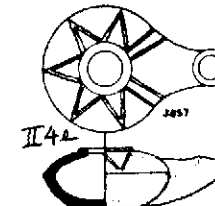
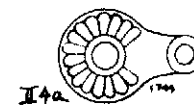
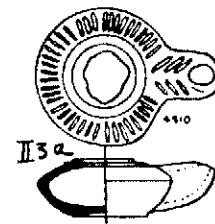
## IV. Lamps with ornamented sunk top, but form not clear. These lamps were all found in such positions as to make it appear that they are Hellenistic.

## 1. Helios-head, gray paste, dull black glaze.

- a. Reg. No. 1483, S1 cistern 8, June 22, 1909. The other objects found in this cistern were exclusively Hellenistic, First or Second Century B.C.

## 2. Eros, gray paste, black glaze.

- a. Reg. No. 3349, S5 h, July 6, 1910. See Pl. 81 t. All the objects found near this were of the Second Century B.C.



195. Hellenistic lamps, types II 3-6. Scale, 1: 4.

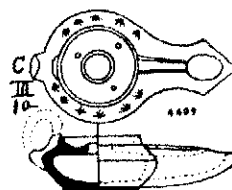
## 3. Wing of a god or an eagle, red paste, red glaze.

- a. Reg. No. 2906, S2 apsidal structure, June 21, 1910. The other objects found were Hellenistic or earlier, but the debris had been disturbed in Roman times.

## D. RED-GLAZED LAMPS

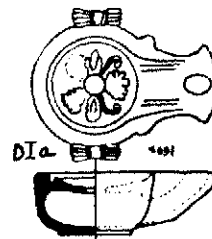
## I. Molded lamp, high form, with spatulated spout.

1. Yellow ware, red slip, knob-handle (winged disc?) each side, floral ornament in relief on sunk top.
  - a. Reg. No. 4691, S10 d, Sept. 27, 1910. See Pl. 81 w.



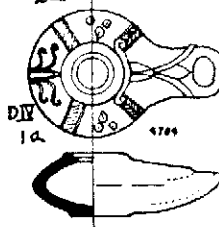
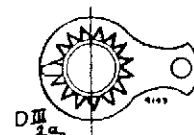
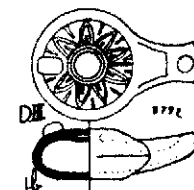
## II. Molded lamp, with spatulated spout and ring-handle.

1. Fine drab paste, red wash, tongue pattern in relief on sunk top.
  - a. Reg. No. 1457, S1 II 12, June 5, 1909.



## III. Molded lamp, with spatulated spout and knob on back end.

1. Red paste, red wash, full top ornamented with tongue pattern in relief.
  - a. Reg. No. 1422, Bas. 13, Aug. 10, 1909.
  - b. Reg. No. 3792, Kaid's Land b, Aug. 8, 1910. See Pl. 81 v.
2. Same as 1, with triangle pattern.
  - a. Reg. No. 4149, S10 e, Aug. 30, 1910.



## IV. Molded lamp, with lotus (?) on neck.

1. Red ware, red slip, full top ornamented in relief.
  - a. Reg. No. 4784, S2 III 70 cistern, Oct. 18, 1910.
  - b. Reg. No. 3467, L. T. E., July 13, 1910.

196. Lamps, types C III 1, D I to D IV. Scale, 1:4.

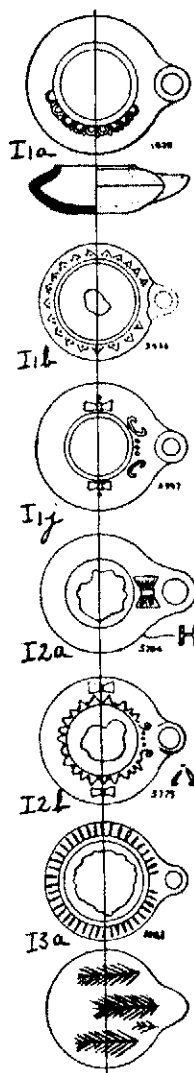
## E. ROMAN LAMPS

## I. Molded lamps, flat circular form with short round spout, sunk top with small mouth, of fine red ware with red glaze, in some cases poorly burned to black.

1. With ornament in relief on outer rim only.<sup>1</sup>
  - a. Reg. No. 1826 (egg and dart pattern), H. S. 1, July 10, 1909.
  - b. Reg. No. 3466 (egg and dart pattern), L. T. E., July 13, 1910.
  - c. Reg. No. 3471 + 3472 (egg and dart pattern), L. T. E., July 13, 1910.
  - d. Reg. No. 3793 (egg and dart pattern), Kaid's Land b, Aug. 8, 1910.
  - e. Reg. No. 4103 (egg and dart pattern), Kaid's Land S, Aug. 24, 1910.
  - f. Reg. No. 3063 (pattern obscure), S. G. T. 3, June 25, 1910.
  - g. Reg. No. 3491 (pattern obscure), L. T. E., July 14, 1910.
  - h. Reg. No. 3492 (pattern obscure), L. T. E., July 14, 1910.
  - i. Reg. No. 3753 (pattern obscure), Kaid's Land, Aug. 5, 1910.
  - j. Reg. No. 3947 (pattern obscure), Kaid's Land, Aug. 17, 1910.
2. Same as 1, with letter in relief on bottom.
  - a. Reg. No. 3754 (H on bottom), Kaid's Land a, Aug. 5, 1910.
  - b. Reg. No. 3775 (A on bottom), Kaid's Land b, Aug. 6, 1910.
  - c. Reg. No. 3468 (bottom only, inscribed A.N), L. T. E., July 13, 1910.
3. With line pattern on outer rim and three palm leaves in delicate relief on bottom.
  - a. Reg. No. 3921, Kaid's Land b, Aug. 16, 1910.
4. With pentagonal rim around sunk part;—at each corner of pentagon, a A; on each side, a scroll between two beads.
  - a. Reg. No. 4863, S11 y, Oct. 15, 1910.

<sup>1</sup>In most of these examples, the sunk part of the top has been broken away.

5. With ornament in relief on sunk top, and pattern in relief or impressed around rim.  
Helios-head in centre, egg and dart pattern around rim:



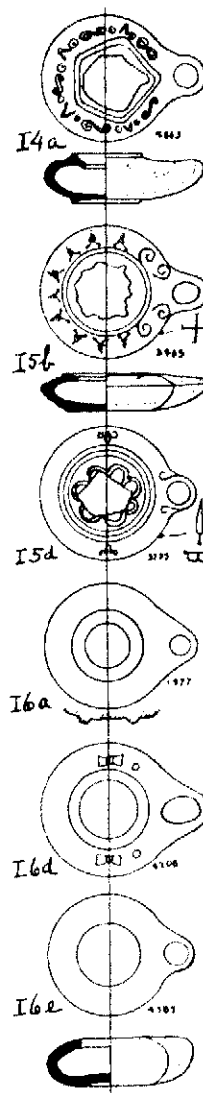
197. Roman lamps, types I 1-3. Scale, 1:4.

- a. Reg. No. 982 Bas. 2d stratum, June 29, 1909.  
Eagle in centre, palmette pattern impressed:  
b. Reg. No. 3465, L. T. E., July 13, 1910. See Pl. 81 s.  
Lancette-pattern in centre, palmette pattern impressed on rim:  
c. Reg. No. 3469, L. T. E., July 13, 1910.  
Lancette-pattern in centre, relief ornament (rosette, bow-knot, etc.) on each side of rim:  
d. Reg. No. 3735 (Q incised in centre of bottom; below it the monogram B), S7 d, Aug. 4, 1910.

- e. Reg. No. 3470, L. T. R., July 13, 1910.  
f. Reg. No. 875 (frag.), Bas. 2d stratum, June 14, 1909.

6. Similar to No. 1, but usually of darker glaze and with spout semi-oval and less sharply marked off from body (nearly like Byzantine type F I).

- a. Reg. No. 1977, L. T. 5 d, Aug. 28, 1909.  
b. Reg. No. 3920, Kaid's Land b, Aug. 16, 1910.



198. Roman lamps, types I 4-6. Scale, 1:4.

- c. Reg. No. 4189, Samarra's Land a E, Sept. 2, 1910.  
d. Reg. No. 4206, Samarra's Land b, Sept. 3, 1910.  
e. Reg. No. 4385, Samarra's Land c, Sept. 6, 1910.

## F. LATE ROMAN AND BYZANTINE LAMPS

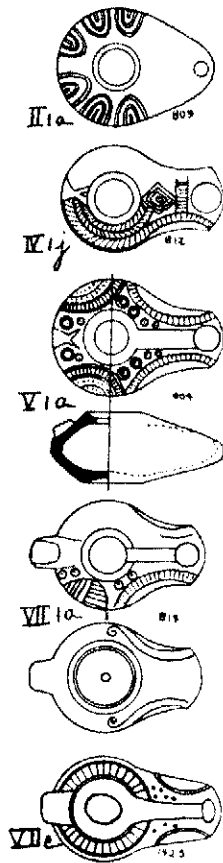
### I. Molded lamps. Spout is a short oval projection.

1. Fine pink ware, with dark red wash, various patterns.  
a. Reg. No. 870, Bas. 2d stratum, June 14, 1909.  
b. Reg. No. 1018, Bas. cistern 1, July 12, 1909.  
c. Reg. No. 1016, Bas. cistern 1, July 12, 1909.  
d. Reg. No. 1017, Bas. cistern 1, July 12, 1909.  
e. Reg. No. 905, Bas. 2d stratum, June 22, 1909.

### II. Molded lamps, oval form.

1. Gray ware, dark red wash, various patterns.  
a. Reg. No. 809, Bas. N, June 7, 1909.  
b. Reg. No. 818, Bas. 2d stratum, June 8, 1909.  
c. Reg. No. 856, Bas. 2d stratum, June 12, 1909.  
d. Reg. No. 871, Bas. 2d stratum, June 14, 1909.

- e. Reg. No. 951, Bas. 2d stratum, June 25, 1909.  
f. Reg. No. 952, Bas. 2d stratum, June 25, 1909.



199. Late Roman and Byzantine lamps, types II-V and VII. Scale, 1: 4.

III. Molded lamp, short spatulated spout, with rudimentary handle on top of back.

1. Hard red-gray ware, hatched semi-circular pattern.  
a. Reg. No. 816, Bas. 2d stratum, June 8, 1909.

IV. Molded lamp, round body, spatulated spout, raised rudimentary handle on top of back, various patterns in linear relief.

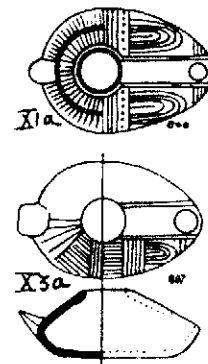
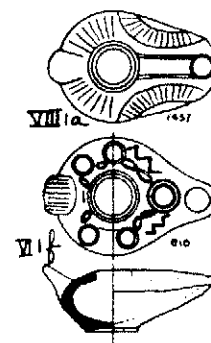
1. Hard, reddish ware.  
a. Reg. No. 901, Bas. 2d stratum, June 22, 1909.  
b. Reg. No. 947, Bas. 2d stratum, June 25, 1909.  
c. Reg. No. 944, Bas. 2d stratum, June 25, 1909.  
d. Reg. No. 878, Bas. 2d stratum, June 15, 1909.  
e. Reg. No. 916, Bas. 2d stratum, June 23, 1909.  
f. Reg. No. 950, Bas. 2d stratum, June 25, 1909.  
g. Reg. No. 879, Bas. 2d stratum, June 15, 1909.  
h. Reg. No. 854, Bas. 2d stratum, June 15, 1909.  
i. Reg. No. 817, Bas. 2d stratum, June 8, 1909.  
j. Reg. No. 812, Bas. N, June 7, 1909.  
k. Reg. No. 942A, Bas. 2d stratum, June 25, 1909.  
l. Reg. No. 945, Bas. 2d stratum, June 25, 1909.  
m. Reg. No. 946, Bas. 2d stratum, June 25, 1909.  
n. Reg. No. 819, Bas. 2d stratum, June 8, 1909.  
o. Reg. No. 941, Bas. 2d stratum, June 25, 1909.  
p. Reg. No. 815, Bas. 2d stratum, June 8, 1909.

- q. Reg. No. 874, Bas. 2d stratum, June 14, 1909.  
r. Reg. No. 943A, Bas. 2d stratum, June 25, 1909.  
s. Reg. No. 869, Bas. 2d stratum, June 14, 1909.  
t. Reg. No. 855, Bas. 2d stratum, June 12, 1909.  
u. Reg. No. 866, Bas. 2d stratum, June 14, 1909.  
See Pl. 81 x.  
v. Reg. No. 880, Bas. 2d stratum, June 15, 1909.  
w. Reg. No. 865, Bas. 2d stratum, June 14, 1909.

V. Same as IV, with a channel from mouth to wick-hole.

- a. Reg. No. 804, Bas. 2d stratum, June 4, 1909.  
b. Reg. No. 881, Bas. 2d stratum, June 15, 1909.  
See Pl. 81 y.

VI. Molded lamp, similar to VII, with a projecting handle behind, but without channel. The outline from body to tip of spout suggests, by its concave curve, the spatulated spout of IV. See Fig. 200.



200. Late Roman and Byzantine lamps, types VI 1 f, VIII 1 a, X 1 and 3. Scale, 1: 4.

- a. Reg. No. 949, Bas. 2d stratum, June 25, 1909.  
See Pl. 81 z.  
b. Reg. No. 900, Bas. 2d stratum, June 22, 1909.  
c. Reg. No. 863, Bas. 2d stratum, June 14, 1909.  
d. Reg. No. 862, Bas. 2d stratum, June 14, 1909.  
e. Reg. No. 811, Bas. 2d stratum, June 7, 1909.  
f. Reg. No. 810, Bas. 2d stratum, June 7, 1909.  
g. Reg. No. 915, Bas. 2d stratum, June 23, 1909.  
h. Reg. No. 850, Bas. 2d stratum, June 12, 1909.  
i. Reg. No. 842, Bas. 2d stratum, June 11, 1909.

VII. Like V, with channel on spout but with a projecting handle behind.

- a. Reg. No. 814, Bas. N, June 8, 1909. See Pl. 81 aa.
- b. Reg. No. 864, Bas. 2d stratum, June 14, 1909.
- c. Reg. No. 1425, H. S. S of cistern 8, June 22, 1909.

VIII. Molded lamps, elongated, ovoid form, with wick-hole in small end, with projecting handle on large end, channel connecting mouth and wick-hole, pattern in linear relief.

- a. Reg. No. 1437, S1, debris above basins, June 1, 1909.
  - b. Reg. No. 2795-6, Roadway, July 30, 1909.
  - c. Reg. No. 963, Bas. 2d stratum, June 25, 1909.
  - d. Reg. No. 902, Bas. 2d stratum, June 22, 1909.
  - e. Reg. No. 832, Bas. 2d stratum, June 9, 1909.
  - f. Reg. No. 974, Bas. 2d stratum, June 10, 1909.
  - g. Reg. No. 833, Bas. 2d stratum, June 9, 1909.
  - h. Reg. No. 852, Bas. 2d stratum, June 12, 1909.
  - i. Reg. No. 983, Bas. 2d stratum, June 29, 1909.
  - j. Dis. No. 6, S1 N top stratum, June 5, 1909.
- The channel of the last number is nearly rudimentary like IX, below.

IX. Like VII, but channel indicated by lines only.

- a. Reg. No. 929, Bas. 2d stratum, June 24, 1909.
- b. Reg. No. 931, Bas. 2d stratum, June 24, 1909.

X. Molded ovoid lamps, with projecting handle behind, channel from mouth to wick-hole indicated by blank in the pattern. Pattern in linear relief. Hard, reddish ware.

- 1. Double row of radiating lines around back of body.
  - a. Reg. No. 800, Bas. 2d stratum, June 3, 1909.
  - b. Reg. No. 801, Bas. 2d stratum, June 3, 1909.
  - c. Reg. No. 802, Bas. 2d stratum, June 3, 1909.
  - d. Reg. No. 845, Bas. 2d stratum, June 12, 1909.
  - e. Reg. No. 846, Bas. 2d stratum, June 12, 1909.
  - f. Reg. No. 920, Bas. 2d stratum, June 23, 1909.
  - g. Reg. No. 923, Bas. 2d stratum, June 24, 1909.
  - h. Reg. No. 973, Bas. 2d stratum, June 28, 1909.
  - i. Reg. No. 994, Bas. 2d stratum, July 2, 1909.
  - j. Reg. No. 995, Bas. 2d stratum, July 3, 1909.
  - k. Reg. No. 996, Bas. 2d stratum, July 3, 1909.

2. Different pattern.

- a. Reg. No. 912, Bas. 2d stratum, June 23, 1909.
- b. Reg. No. 925, Bas. 2d stratum, June 24, 1909.
- c. Reg. No. 1441, S1 N upper stratum, June 2, 1909.

3. Different pattern.

- a. Reg. No. 807, Bas. N, June 7, 1909.

4. Different pattern.

- a. Reg. No. 813, Bas. N, June 9, 1909.

5. Different pattern.

- a. Reg. No. 803, Bas. 2d stratum, June 4, 1909.
- b. Reg. No. 806, Bas. N, June 7, 1909.

6. Different pattern.

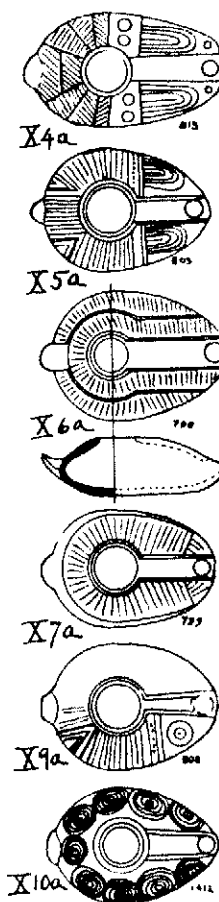
- a. Reg. No. 798, Bas. 2d stratum, June 3, 1909.
- b. Reg. No. 899, Bas. 2d stratum, June 22, 1909.
- c. Reg. No. 922, Bas. 2d stratum, June 23, 1909.
- d. Reg. No. 993, Bas. E cut 2, July 1, 1909.
- e. Reg. No. 1411, Bas. 13, Aug. 8, 1909.

7. Different pattern.

- a. Reg. No. 799, Bas. 2d stratum, June 3, 1909.

8. Different pattern.

- a. Reg. No. 930, Bas. 2d stratum, June 24, 1909.
- See Pl. 81 bb.



201. Late Roman and Byzantine lamps, types X 4-10.  
Scale, 1:4.

9. Different pattern.

- a. Reg. No. 808, Bas. 2d stratum, June 7, 1909.

10. Different pattern.

- a. Reg. No. 1412, Bas. 13, Aug. 10, 1909.
  - b. Reg. No. 962, Bas. 2d stratum, June 26, 1909.
- See Pl. 81 cc.
- c. Reg. No. 851, Bas. 2d stratum, June 12, 1909.

## CHAPTER VI

### FAIENCE

A large number of fragments of vessels were found, made of blue or green faience after the Egyptian manner. Most of them were faded and decayed. Nearly all the forms were clearly imitations of the black-glazed or of other Greek and Hellenistic pottery vessels. The types Nos. 2 and 5, below, resemble the Megarian bowls in form and in relief decorations. The positions in which the pieces enumerated were found indicate that this faience ware was used during the Hellenistic period, and perhaps also somewhat earlier. The same forms of pottery are found at Greek sites in Egypt of this period, and although the deep cobalt blue of many of the fragments seems un-Egyptian, it is possible that the ware was made at some site in the Egyptian Delta.

In addition to the vessels a few Egyptian amulets of blue faience (see Chap. XI A I) and a number of faience beads (see Chap. XI C IV) were found.

1. Blue faience with relief decoration.
  - a. Reg. No. 3885, S6 h, Aug. 15, 1910. Pointed leaves in relief.
  - b. Dis. No. 1310, H. S. 1, July 12, 1909. Rosette in relief. Fragment.
  - c. Dis. No. 1497, L. T. 5, under street, Sept. 30, 1909. Flower (?) in relief. Fragment.
  - d. Dis. No. 1557, L. T. E., July 15, 1910. Fragment.
2. Hollow bowl (same shape as the Megarian bowls) with rosette in relief on bottom, and black or brown lines on blue body.
  - a. Reg. No. 2478, S3-314 E, Oct. 8, 1909.
  - b. Reg. No. 2193, S3 a W, Oct. 6, 1909.
3. Wide jar with molded rim decorated with hatched bands. Blue faience.
  - a. Reg. No. 1818, H. S. 2, July 2, 1909.
4. Blue faience with vertical bands of zigzags and hatched lines in black on inside. A bowl.
  - a. Reg. No. 4350, Samarra a 5, Sept. 5, 1910.
5. Cream faience with greenish-brown triangle pattern in relief.
  - a. Reg. No. 4501, Samarra's Land, Sept. 14, 1910.
6. Fragment of pale blue faience with a Greek inscription in black-brown.
  - a. Reg. No. 4862, S11 z, Oct. 15, 1910.
7. Blue faience with fluted side.
  - a. Reg. Nos. 4590, 4622, one piece in S8-811 (Sept. 20) and one in S7 near cist. 4 (Sept. 22), 1910.
8. Blue faience with line pattern. A square jug.
  - a. Reg. No. 3591, S6 f, July 23, 1910.
9. Pale green faience. Molded head of a satyr from the side of a vessel. Had been stuck on as an ornament.
  - a. Reg. No. 4605, S8 d beside Greek Fort Wall, Sept. 21, 1910.
10. Cylindrical vase of pale green faience. Diam., 7 cm.; h., 16.2; top broken off.
  - a. Dis. No. 786, S8 outside Greek Fort Wall, Sept. 3, 1910. Fragment.
11. Fragment of a flat bottle, lentoid, with two handles. Pale green faience.
  - a. Reg. No. 1920, L. T. 1 c, Aug. 21, 1909.
12. Bowls with incurving rim of blue faience.
  - a. Reg. No. 3392, S5 Seleucidan street, July 8, 1910.
  - b. Dis. No. 240, S3 f, Sept. 30, 1909. Fragment.
  - c. Dis. No. 1443, L. T. 4 c, Sept. 8, 1909. Fragment.
  - d. Dis. No. 276, S3 street, Oct. 9, 1909.



## 13. Bowl with swelling rim and ring-base, blue.

- a. Dis. No. 329, S3 corner cistern, Oct. 17, 1909. Fragment.

## 14. Bowl with thick, flat rim, blue.

- a. Dis. No. 299, S3 street cistern, Oct. 20, 1909. Fragment.  
b. Dis. No. 1421, L. T. 1 cave 5, Aug. 31, 1909. Fragment.

## 15. Plate with swelling rim and ring-base, blue.

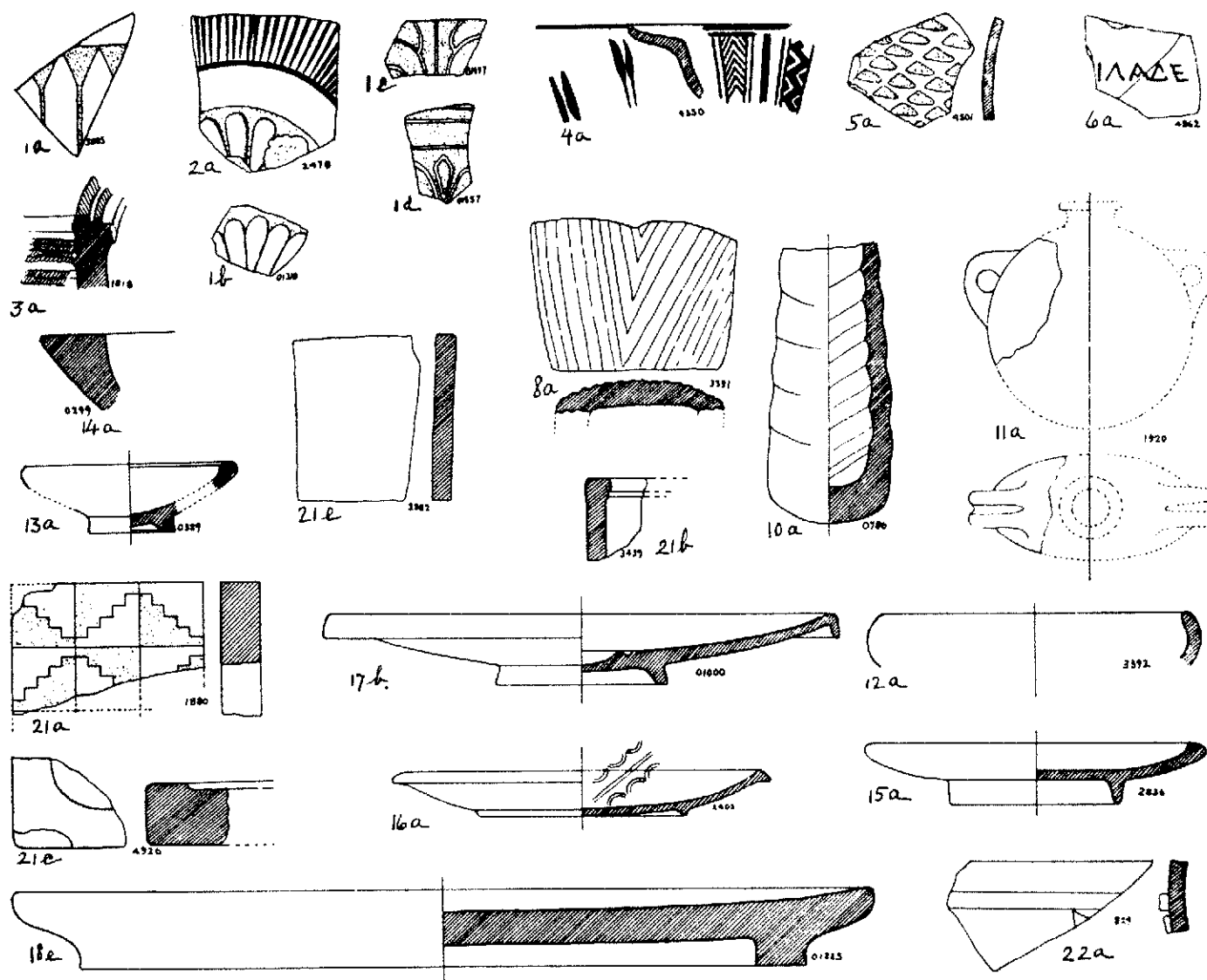
- a. Reg. No. 2836, N. G. T. 8, June 6, 1910.

## 18. Heavy plates with thick ring-base, of pale blue or green faience. All fragments, badly weathered.

- a. Dis. No. 1300, H. S. 1, June 18, 1909. Blue.  
b. Dis. No. 912, S10 a, Sept. 21, 1910. Green.  
c. Dis. No. 1152, S11-6, Oct. 10, 1910. Green.  
d. Dis. No. 1163, S11 z, Oct. 15, 1910. Green.  
e. Dis. No. 1225, S11-13 sub, Oct. 18, 1910. Green.

## 19. Fragments of bowls with ring-bases.

- a. Dis. No. 1405, L. T. 1 b cave 3, Aug. 27, 1909.



202. Blue or green faience. Scale, 1:4.

## 16. Plate with slightly turned-down rim and ring-base.

- a. Reg. No. 2405, S3 c, Sept. 29, 1909. Inside bottom slightly impressed, pattern showing darker owing to thicker glaze.  
b. Dis. No. 135, S2 III 28 sub, Sept. 2, 1909. Fragment.

## 17. Plate with turned-down rim and ring-base, of pale blue faience.

- a. Dis. No. 305, S3 street cist., Oct. 22, 1909. Fragment.  
b. Dis. No. 1000, S10 d, Sept. 27, 1910. Fragment.

- b. Dis. No. 227, S3 d, Sept. 27, 1909. Green.

- c. Dis. No. 230, S3 d, Sept. 30, 1909. Green.

## 20. Fragments of bowls.

- a. Dis. No. 1532, L. T. 3 b under calidarium. Green.  
b. Dis. No. 1482, L. T. 5 near street floor. Green.  
c. Dis. No. 1465, L. T. 5 near street floor. Blue.  
d. Dis. No. 333, S3-306, Oct. 8, 1909. Green.  
e. Dis. No. 517, S7-755 N, Sept. 14, 1910. Green.  
f. Dis. No. 429, S7-770, Sept. 16, 1910. Blue.  
g. Dis. No. 660, S8 a, Sept. 12, 1910. Green.  
h. Dis. No. 662, S8 a, Sept. 10, 1910. Blue.

- i. Dis. No. 678, S8 b, Sept. 12, 1910. Blue.
- j. Dis. No. 706, S8 d, Sept. 17, 1910. Green.
- k. Dis. No. 869, S9 SE, Sept. 20, 1910. Green.
- l. Dis. No. 1155, S11-8, Oct. 7, 1910. Green.
- m. Dis. No. 1192, S11 a tower deep, Oct. 18, 1910. Blue.
- n. Dis. No. 444, L. T. E., July 14, 1910. Blue.

## 21. Tiles.

- a. Reg. No. 1880, L. T. 1 b, Aug. 18, 1909. On one side a recess pattern in very slight relief. The raised parts are a trifle darker green than the rest. Width, 11.1 cm.; thickness, 2.3 cm.; length uncertain (broken).
- b. Reg. No. 3439, L. T. E. b, July 12, 1910. A molding runs along one side of the preserved edge. Light-green glaze. Thickness, 1.2 cm.
- c. Reg. No. 4926, S11-1 N deep, Oct. 22, 1910. Corner of a square tile with a sunk circle about

4 mm. deep in middle of one side. About 12 cm. square; 3.6 cm. thick. Pale blue.

- d. Dis. No. 1179, S11 N, Oct. 17, 1910. Fragments of pale-green tile, 19 mm. thick.
- e. Reg. No. 2882, S2 under apsidal building, June 20, 1910.

## 22. Glazed pottery.

Very little glazed pottery was found, and that was usually in surface debris and Arabic in date. But one piece was found which appeared to be more ancient.

- a. Fragment of a jar of fine, hard red ware with a shiny blue glaze and a thin iridescent patina. Ornamentation in relief, a band and the corner of some indeterminable object. The relief of separate strips of same clay stuck on. Reg. No. 829, Bas. 2d stratum, June 8, 1909.

## CHAPTER VII

### GLASS

#### A. GLASS VESSELS

There were found at Samaria three distinct classes of glass vessels: (1) Small flasks of variegated glass. (2) Open bowls of translucent blue or yellowish glass with fluted exterior. (3) A variety of vessels of blown glass sometimes with colored decorations. The variegated glass is sometimes called Phœnician by Palestinian archæologists, and is known in Egypt from the New Empire down. It is probably the earliest glass found at Samaria, although but one piece (I 4 d, below) was found in exclusively Israelite surroundings. The fluted translucent glass was found in almost all periods of the black or Post-Israelite debris. The blown glass was found usually in debris of the Roman period.

##### I. Variegated glass.

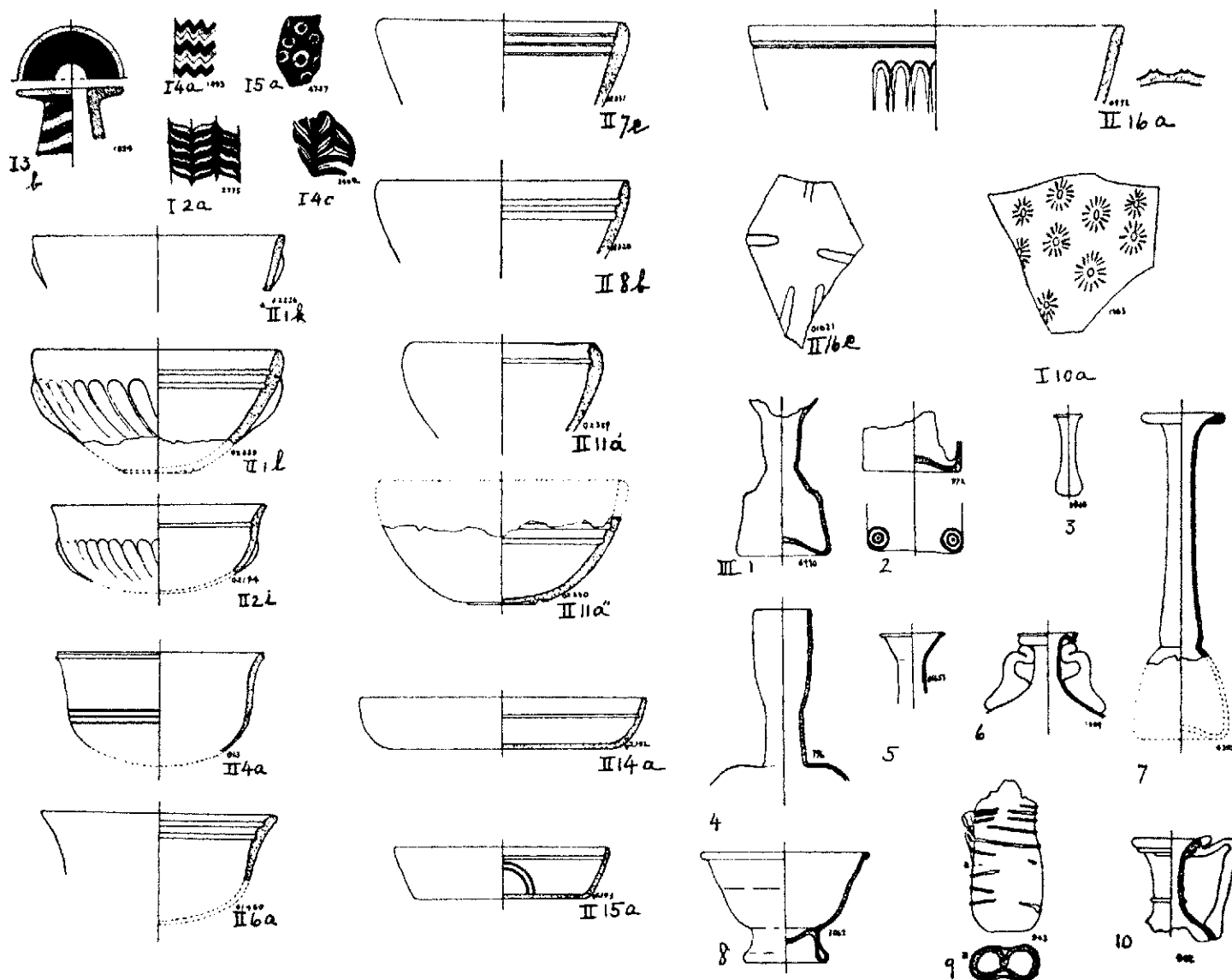
All the examples are fragments of small flasks with rough interior surface (as if made on a core), having with one exception a wavy zigzag pattern made of filaments of colored glass fused into the outer surface. See Fig. 203, below.

- |  |  |
|--|--|
| 1. Yellow body with blue and white bands.<br>a. Reg. No. 2556, S3 street cistern, Oct. 18, 1909.<br>The objects in this cistern were all probably previous to 150 B.C.   | e. Reg. No. 2762, Gateway, August, 1909.<br>f. Reg. No. 4734, S2 III 70, Seleucidan street sub, Oct. 1, 1910.  |
| 2. Blue body with yellow bands.<br>a. Reg. No. 2775, S3-303 just above Ahab wall, Oct. 17, 1909.<br>b. Reg. No. 1478, H. S. 1, June 17, 1909. Neck.<br>c. Dis. No. 410, S5 e, July 5, 1910.  | 5. Dark blue body with eye-spots, each a blue dot in a white circle.<br>a. Reg. No. 4737, S2 III 70, Seleucidan street W, Oct. 1, 1910.                                |
| 3. Deep blue body with yellow and light-blue bands.<br>a. Reg. No. 1736, vault cist. 2, Aug. 23, 1909. Neck, with part of loop-handle.<br>b. Reg. No. 1824, H. S. 4, July 2, 1909. Part of neck and rim.<br>c. Dis. No. 403, S5 b, July 4, 1910.     | 7. Foot of small vase similar to above (?), of dark blue body.<br>a. Reg. No. 3008, S. G. T. 2, June 22, 1910. H., 8 mm.; diam., 13 mm.                                |
| 4. Deep blue body with yellow and white bands.<br>a. Reg. No. 1895, L. T. 2 d, Aug. 20, 1909.<br>b. Reg. No. 2171, S3 c above Israelite stratum, Oct. 5, 1909.<br>c. Reg. No. 2442, S3-307, Oct. 6, 1909.<br>d. Reg. No. 2452, S3-306, Oct. 6, 1909. | 8. Blue glass with white band, neck of glass jug with spout.<br>a. Reg. No. 2954, S. G. T. 7, June 22, 1910.   |
|  | 9. Fragments of bottom of bowl with solid ring-base, of opaque blue glass.<br>a. Reg. No. 2844, N. G. T. 1, June 16, 1910.<br>b. Reg. No. 1150a, S11-6, Oct. 10, 1910. |
|  | 10. Fragment of blue glass with yellow flowers (or rayed discs). Dis. No. 1563, L. T. E., July 8, 1910.  |

##### II. Molded translucent glass.

The molded translucent glass was of different colors, — pale yellow with a heavy whitish patina, pale blue with a heavy black patina, and pale green with a white patina. The forms were: (1) Open bowls with fluted or ribbed exterior and one or more incised lines inside

edge,—of yellow and green glass. (2) Open bowls with plain exterior (in one case three incised lines) and one or more incised lines inside edge,—of yellow, blue, and green glass. (3) Plate with incised rings,—of yellow glass. These forms are all found in the red-glazed pottery including the fluted and incised details (see Fig. 185). The vessels seem to have been molded and then dressed by rubbing with emery (?) and polishing. The rings were apparently incised by turning on a wheel or on a lathe.



203. Glass vessels of all types. Scale, 1:4, except for variegated glass, Nos. I 2 a, 3 b, 4 a, 4 c, 5 a, which are 1:2.

1. Fluted bowl of thick yellow glass with thick whitish patina. Diam., 10 to 14 cm. Only fragments were found, as follows:

- a. Dis. No. 1527, L. T. 4 c room 46, Sept. 10, 1909.
- b. Dis. No. 380, S4 stair bath, Oct. 22, 1909.
- c. Dis. No. 476, S7 just south of vault, Sept. 13, 1910.
- d. Dis. No. 693, S8 b, Sept. 27, 1910.
- e. Dis. No. 713, S8 d, Sept. 15, 1910.
- f. Dis. No. 551, S8-801 S, Sept. 1, 1910.
- g. Dis. No. 577, S8-807 sub, Sept. 1, 1910.
- h. Dis. No. 1251, S9-901 cistern, Oct. 11, 1910.
- i. Dis. No. 1174, S11 x, Oct. 15, 1910.
- j. Dis. No. 2209, S2-31 above floor, July 9, 1909.
- k. Dis. No. 2226, S2 S middle top dirt, July, 1909.
- l. Dis. No. 2333, vault cistern 2, Aug. 23, 1909.

2. Fluted bowl of thick translucent greenish glass with low ring on round bottom. Diam., 10-14 cm.

- a. Reg. No. 1007, Bas. N sub Roman, Aug. 8, 1909.
- b. Reg. No. 1415, Bas. 4 room 9 under basis, Aug. 10, 1909.
- c. Dis. No. 14, S1 top debris, June 10, 1909.
- d. Dis. No. 668, S8 a, Sept. 15, 1910.
- e. Dis. No. 886, S9 N top dirt, Sept. 14, 1910.
- f. Dis. No. 988, S10 d N of Greek Fort Wall, Sept. 20, 1910.
- g. Dis. No. 1118, S11-2 sub, Oct. 6, 1910.
- h. Dis. No. 1170, S11 x, Oct. 15, 1910.
- i. Dis. No. 2194, S1 cist. 8.
- j. Dis. No. 2209, S2-31 above floor, July 9, 1909.

3. Fluted bowl of translucent blue glass.
  - a. Dis. No. 899, S 9 N top dirt, Sept. 13, 1910.
  - b. Dis. No. 2370, H. S. 1, June 22, 1909.
4. Plain flaring bowl with curved rim, of thick translucent yellow glass ornamented with incised lines (rings).
  - a. Dis. No. 13, S1 top dirt, June 10, 1909.
  - b. Dis. No. 612, S8-816, Sept. 21, 1910.
  - c. Dis. No. 674, S8 b under Roman wall, Sept. 2, 1910.
5. Same form as 4, of translucent pale-green glass.
  - a. Dis. No. 2223, S2 top dirt, July, 1909.
  - b. Dis. No. 717, S8 d, Sept. 14, 1910.
  - c. Dis. No. 941, S10 a, Sept. 30, 1910.
6. Same form as 4, of translucent blue glass.
  - a. Dis. No. 1460, L. T. 5 d, Aug. 28, 1909.
  - b. Dis. No. 167, S3 N, Sept. 9, 1909.
  - c. Dis. No. 488a, S7 cistern 3, Sept. 8, 1910.
  - d. Dis. No. 2372, H. S. 1, June 22, 1909.
7. Plain open bowl, ornament, with incised lines (rings) of translucent yellow glass.
  - a. Dis. No. 488b, S7 cistern 3, Sept. 8, 1910.
  - b. Dis. No. 148, L. T. 5 top dirt, Sept. 13, 1909.
  - c. Dis. Nos. 2331-2332, vault cistern 2, Aug. 25, 1909.
8. Plain open bowl of thick translucent pale-green glass, ornamented with incised lines (rings).
  - a. Dis. No. 1335, L. T. 1 a, Aug. 17, 1909.
  - b. Dis. No. 2328, vault cistern 2, Aug. 25, 1909.
9. Plain open bowl, like 7 and 8, of translucent blue glass.
  - a. Dis. No. 190, S3 a W, Oct. 8, 1909.
  - b. Dis. No. 293, S3 street cistern, Oct. 20, 1909.
  - c. Dis. No. 301, S3 street cistern, Oct. 20, 1909.
  - d. Dis. No. 536, S7-770, Sept. 15, 1910.
10. Plain bowl of rose-colored translucent glass of same form as 7.
  - a. Dis. No. 2225, S1 top dirt, July, 1909.
  - b. Dis. No. 177, S3 a, Oct. 6, 1909.
11. Hollow bowl of translucent greenish glass.
  - a. Dis. Nos. 2328, 2329, 2330, vault cist. 2, Aug. 25, 1909.
12. Hollow bowl of blue translucent glass.
  - a. Dis. No. 12, S1 top dirt, June 10, 1909.
  - b. Dis. No. 2224, S2 top dirt, July, 1909.
  - c. Dis. No. 528, S7-770, Sept. 12, 1910.
  - d. Dis. No. 954, S10-1009 sub, Sept. 6, 1910.
14. Shallow bowl with sides rounding into a flat bottom, decorated with incised ring below rim inside and two incised rings in bottom. Thick yellow glass.
  - a. Dis. No. 2192, S1 cistern 8. Diam., 17 cm.
15. Shallow bowl with straight sloping sides and flat bottom, decorated with incised ring. Thick yellow glass.
  - a. Dis. No. 2193, S1 cistern 8. Diam., 13 cm.
16. Open bowl of clear glass with cut or ground pattern. Fluted pattern.
  - a. Dis. No. 572, S8-805, Sept. 14, 1910.
  - b. Dis. No. 1602, Gateway, July 3, 1909.  
Lines, pattern not clear:
  - c. Dis. No. 1621, Gateway, July 3, 1909.

### III. Blown glass.

A large number of fragments of blown glass were found at the summit, at the Basilica, the Gateway, Kaid's Land, and Samarra's Land. These were of thin clear glass with rims and bases made by folding the glass. Handles were strands of melted glass fused on. The ornamentation was made by fusing on plain or colored filaments. The forms were numerous, dishes, bowls, handled flasks, bottles, kohl-tubes, goblets, and cups. The fragments were most numerous in the distinctively Roman deposits of debris with coins of the 3d and 4th Centuries A.D.

1. Reg. No. 980, Bas. 2d stratum, June 28, 1909.
2. Reg. No. 972, Bas. 2d stratum, June 26, 1909.
3. Reg. No. 3968, Kaid's Land a, Aug. 18, 1910.
4. Reg. No. 796, Bas. 2d stratum, June 5, 1909.
5. Dis. No. 1655, Bas. 2d stratum, July 5, 1909.
6. Reg. No. 1009, Bas. N, July 8, 1909.
7. Reg. No. 4202, Samarra's Land, Sept. 3, 1910.
8. Reg. No. 3062, S. G. T. 3, June 25, 1910.
9. Reg. No. 943, Bas. 2d stratum, June 24, 1909.
10. Reg. No. 942, Bas. 2d stratum, June 24, 1909.

### B. OTHER GLASS OBJECTS

The other objects of glass found include seals, rings, bracelets, beads, whorls or buttons, ring-sets or inlays, sticks, and two small game-pieces.

1. Cone seals of translucent blue glass of the Hellenistic period. See Chap. XI B II.
2. Rings.
  - a. Reg. No. 2083, L. T. 5-53, Sept. 18, 1909. Beveled band ring, of translucent, deep blue glass. Diam., 27 mm.; diam. of hole, 14 mm.
  - b. Reg. No. 4443, Samarra's Land c 1, Sept. 8, 1910. Ring with small bezel (all one piece) of clear glass. Diam., 18 mm.
3. Bracelets.
  - a. Reg. No. 4658, S8-880, Sept. 26, 1910. Broad band (17 cm. wide) of yellow glass, fused ornament of black and white wavy strands. Fragment.
  - b. Dis. No. 1275, vault cistern 2, Aug. 25, 1909. Round section, of translucent, pale-blue glass. Fragment.
  - c. Dis. No. 234, S3 d, Oct. 6, 1909. Triangular section, blue glass, with border of fused black and white glass on two edges. Diam., 8.5 cm. Fragment.
  - d. Reg. No. 941, Bas. 2d stratum, June 24, 1909. Like c, except that body is green glass.
  - e. Reg. No. 1367, Bas. cistern 1, July 23, 1909. Round section, clear glass with spiral markings and black spiral band fused in. Fragment.
  - f. Reg. No. 1401, Bas., coin room, under basis, Aug. 10, 1909. Round section, clear glass, thread fused in spirally. Fragment.
  - g. Reg. No. 884, Bas. 2d stratum, June 16, 1909. Opaque black glass.
  - h. Reg. No. 1408, Bas., coin room, under basis, Aug. 10, 1909. Blue glass.
4. Beads, whorls or buttons. See under Beads, Chap. XI C II and III.
5. Inlays or ring-sets. See also Chap. XI B III 12. Several hundred small glass pieces were found, both round and oval, flat on one side and unpierced. They varied in size from 8 to 24 mm., the greater number being about 11 to 13 mm. The glass was the Hellenistic blue, green or yellow glass, with white or black patina. They were found in all Hellenistic and Roman debris. Similar pieces of faience were also found.
6. Sticks, possibly kohl-sticks.
  - a. Reg. No. 3130, S. G. T. 3, June 28, 1910. Broken at both ends, tapering; length, 7.6 cm.; diam., 6 mm.
  - b. Dis. No. 463, S7 dump, Sept. 2, 1910. Two fragments, length, 6.3 and 3.3 cm.
7. Game-pieces.
  - a. Reg. No. 2024, L. T. 5, Sept. 8, 1909. Small conical piece (diam., 15 mm.) of translucent, pale green glass. See Pl. 82 k 5.
  - b. Reg. No. 1929, L. T. 1 a room 15, Aug. 25, 1909. Knuckle-bone of pale blue glass, white patina, length, 18 mm.
8. Inlay-piece, Egyptian.
  - a. Reg. No. 4611, S7-772, Sept. 21, 1910. Thin plate of opaque deep blue glass (or glass paste), length, 31 mm.

## CHAPTER VIII

### STONE VESSELS AND IMPLEMENTS, WHORLS, WEIGHTS, RAW MATERIALS, AND SHELLS

#### A. STONE ALTARS

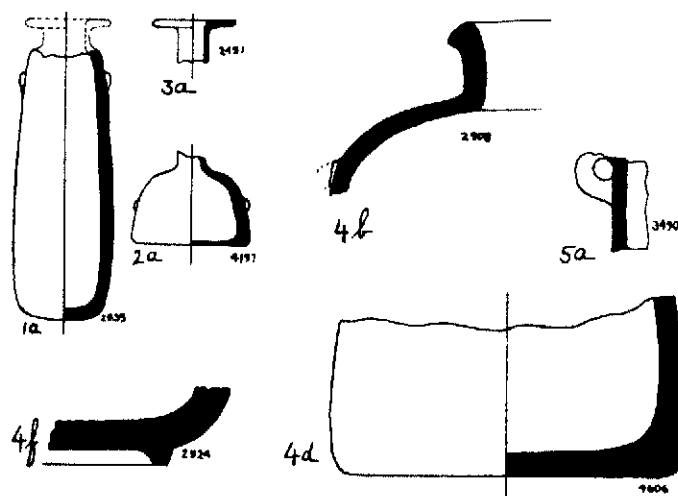
A series of small altars, perhaps incense cups, were found, all in black debris. None of them were in such a position that they could be ascribed with any probability to the Israelite or even the Babylonio-Grecian period; but all of them were without doubt Preherodian.

1. Square altar (see Pl. 80 a, b, c), painted red and decorated on four sides with magical figures, drawn with incised lines.
  - a. Reg. No. 1949, L. T. 1 c, room 15 sub, Aug. 26, 1909. Limestone. H., 9 cm.
  - d. Reg. No. 1946A, L. T. 5 c, Sept. 9, 1909. Limestone. Lateral dimensions, 15.6 x 14 cm.
2. Altar with square base and round cup; base decorated on one side with a recess pattern and on the other with a sign resembling the Egyptian *sma*-sign.
  - a. Reg. No. 1944, L. T. 1 c, Aug. 17, 1909. Limestone. H., 10.7 cm. Square, 15.4 cm.
  - b. Reg. No. 1945, L. T. 1 c, Aug. 24, 1909. Limestone. H., 11 cm.; lateral dimensions, 15.5 x 15 cm. See Pl. 80 e 1.
  - c. Reg. No. 1948, L. T. 1 c, Aug. 26, 1909. Limestone. Lateral dimensions, 13.2 x 11.4 cm. See Pl. 80 e 2.
  - e. Reg. No. 2082, L. T. 53-54, Sept. 18, 1909. Limestone. 14.7 cm. square.
  - f. Reg. No. 2114, L. T. 62 cistern, Sept. 23, 1909. Limestone. H., 11.6 cm., and 14.5 cm. square.
  - g. Reg. No. 2600, S4 f S, Oct. 23, 1909. Limestone. H., 7.4 cm., and 12 cm. square. See Pl. 80 h. Basis not decorated.
3. Circular form, with moldings, hollow on top.
  - a. Reg. No. 1946, L. T. 1 c SE, Aug. 24, 1909. Limestone. H., 14 cm. Painted blue, gray, red and dark red. See Pl. 80 g.
  - b. Reg. No. 2109, L. T. 58, Sept. 21, 1909. Limestone. Diam., 9.6 cm.

#### B. STONE VESSELS

##### I. ALABASTER

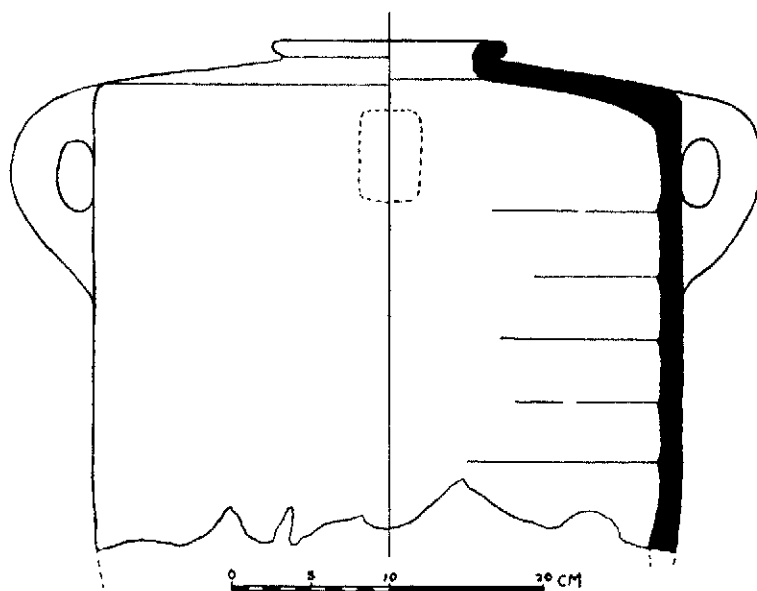
The alabaster vessels are of a stone which I could not distinguish from the Egyptian alabaster. The forms 1-5, below, are Egyptian of the later periods,



204. Alabaster jars, types 1-5. Scale, 1:4.

but cannot be dated in Egypt with sufficient exactness to help in dating the present material.

1. Alabastron, knob-handles.
  - a. Reg. No. 2035, L. T. 3 b 38, Sept. 8, 1909. H., 15.2 cm., neck broken off.
2. Squat pot, with narrow neck and knob-handles.
  - a. Reg. No. 4197, S8 west of Greek Fort Wall, deep, Sept. 3, 1910. H., 4.5 cm. See Pl. 80 j.
3. Neck of an alabastron like 1 or 2.
  - a. Reg. No. 2451, S 3-313, Oct. 7, 1909.
  - a. Reg. No. 1427, S1, June 23, 1909. Diam., about 10 cm.; fragment.
  - b. Reg. No. 1969 (rim undercut), L. T. 1 c, Aug. 27, 1909. Diam., 9 cm.; fragment.
  - c. Reg. No. 2144 (rim undercut), S3 d 304 in yellow debris, Sept. 29, 1909. Diam., 9.1 cm.; whole. See Pl. 80 l.
  - d. Reg. No. 2594, S3-321, Oct. 22, 1909. Diam., 11 cm.; one half.
  - e. Reg. No. 3059 (rim undercut), S2-7, June 25, 1910. Diam., 9.5 cm.

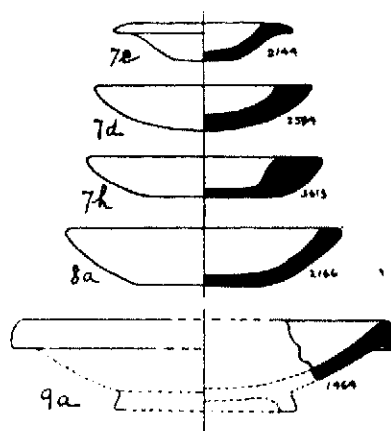


205. Alabaster jar, type 6 (Osorkon jar). Scale, 1:4.

4. Fragments of large, heavy, bulging jars with short neck.
  - a. Reg. No. 2580 (neck and shoulder), S4 g, Oct. 20, 1909.
  - b. Reg. No. 2908 (neck and shoulder with trace of handle), S2-7, June 21, 1910. See Pl. 80 i.
  - c. Reg. No. 1557 (edge of base), S2 south, between west walls of temple, July 17, 1909.
  - d. Reg. No. 4606 (edge of base), S9-940, Sept. 21, 1910.
  - e. Reg. No. 4360 (edge of base), S7 west of 751 under third series of walls, Sept. 18, 1910.
  - f. Reg. No. 2924 (base with ring), S2-7, June 22, 1910.

The following are curved fragments from the sides of similar jars:

  - g. Reg. No. 1640, S2-43 sub, Aug. 30, 1909.
  - h. Reg. No. 2975, S2-7, June 23, 1910.
  - i. Reg. No. 3025, S2-7, June 24, 1910.
  - j. Reg. No. 4621, S7 near cistern 5 deep, Sept. 22, 1910.
5. Small two-handled jar.
  - a. Reg. No. 3490, L. T. E., July 14, 1910.
6. Large two-handled wine or oil jar.
  - a. Reg. No. 4106, S7-742 sub, Aug. 25, 1910. With name of Osorkon II, see p. 247 C 1.
7. Saucer with broad flat rim, sometimes undercut outside.
  - a. Reg. No. 3200, S5 e, June 30, 1910. Diam., about 10 cm.; fragment.
  - g. Reg. No. 3493 (rim undercut), L. T. E., July 14, 1910.
  - h. Reg. No. 3613, S6 g, July 25, 1910. Diam., 12 cm.; fragment.
8. Small bowl with flat rim.
  - a. Reg. No. 2166, S3 a, Oct. 4, 1909. Diam., about 14 cm.; fragment.
9. Bowl with rim turned down outside and undercut.
  - a. Reg. No. 1464, S1 upper debris, June 5, 1909.

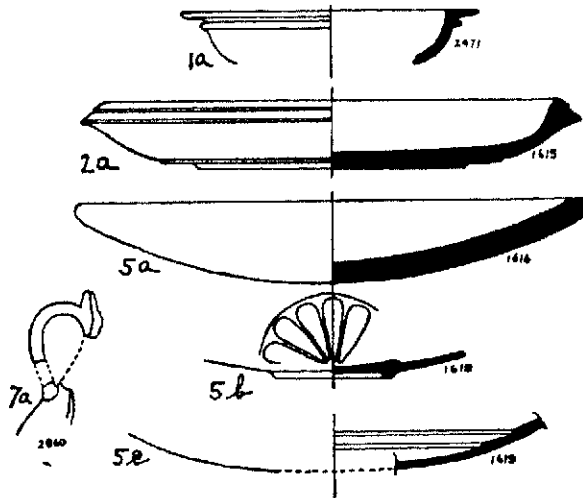


206. Alabaster dishes, types 7-9. Scale, 1:4.



## II. HARD STONE VESSELS

A series of large bowls were found of opaque speckled black and white diorite, translucent black and white diorite, and slate. While the forms of these are not necessarily Egyptian, the identical materials are found in stone vessels in Egypt. Most of the fragments were found in old mixed yellow and black debris, and are, I believe, of the Israelite period, but may be of the Babylonio-Grecian period.



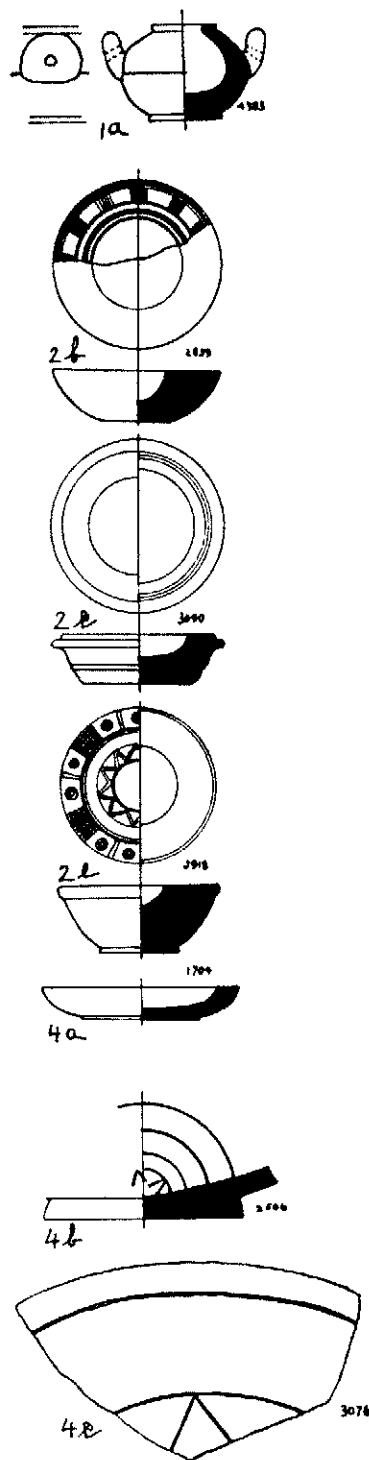
207. Hard stone vessels, types 1-7. Scale, 1:4.

1. Bowl with broad horizontal rim, molding underneath outside, of opaque speckled diorite.
  - a. Reg. No. 2471, S3 a W, Oct. 8, 1909. Diam., 15 cm.; fragment.
2. Large bowl with molded rim, of opaque diorite.
  - a. Reg. No. 1615, S2-47 near rock, Aug. 20, 1909. Diam., 25 cm.; from fragments. See Pl. 80 d.
3. Box-like vessel of opaque diorite.
  - a. Reg. No. 3419, S5 h E, July 11, 1910. Fragment of corner 4.5 x 4 cm., and 6 mm. thick.
4. Cylindrical vessel of translucent diorite, perhaps an Egyptian cylindrical toilet vessel.
  - a. Reg. No. 1614, S2-47 near rock, Aug. 20, 1909. Diam., about 6-8 cm.; fragment.
5. Wide plates of slate.
  - a. Reg. No. 1616, S2-47 near rock, Aug. 20, 1909. Diam., 26 cm.; fragment of rim (plain).
  - b. Reg. No. 1618, S2-47 near rock, Aug. 21, 1909. Diam., 20 to 30 cm., ring-base bottom inside
6. Slate paint palette, with small cup at one end and circular depression at the other, sides ornamented. See Pl. 57 c.
  - a. Reg. No. 3703, S4-202 sub, mixed yellow and black debris, Aug. 1, 1910.
7. Small-handled jug of hard, brittle, red stone.
  - a. Reg. No. 2860, S2-7, June 18, 1910. Fragment of shoulder with loop-handle.
8. Disc with hole, probably lid of a jar, hard, green, brown-mottled serpentine (?).
  - a. Reg. No. 1828, H. S. 2, July 12, 1909, in hole made for removal of stone. Diam., 6.3 cm.; thickness, 5 mm.

## III. LIMESTONE VESSELS

1. Two-handled, squat vase.
  - a. Reg. No. 4383, Samarra's Land b, Sept. 6, 1910. H., 4.7 cm.; diam., 6.8 cm.; width over handles, 8.2 cm. See Pl. 80 k.
2. Small, heavy, mortar-like vessels of uncertain purpose. The top is usually decorated with a pattern of incised lines—checkerboard pattern and circles. These were found in older black debris, but cannot be dated with any certainty.
  - a. Reg. No. 2799, Cl. T., Aug. 11, 1909. Diam., 8.7 cm.
  - b. Reg. No. 2839, N. G. T. 4, June 16, 1910. Diam., 8.4 cm.

- c. Reg. No. 3090, S. G. T. 4, June 26, 1910. Diam., 8.5 cm.  
 d. Reg. No. 3091, S. G. T. 4, June 26, 1910. Diam., 9.2 cm. See Pl. 80 m.  
 e. Reg. No. 3918, S4-417, Aug. 16, 1910. Diam., 8 cm.



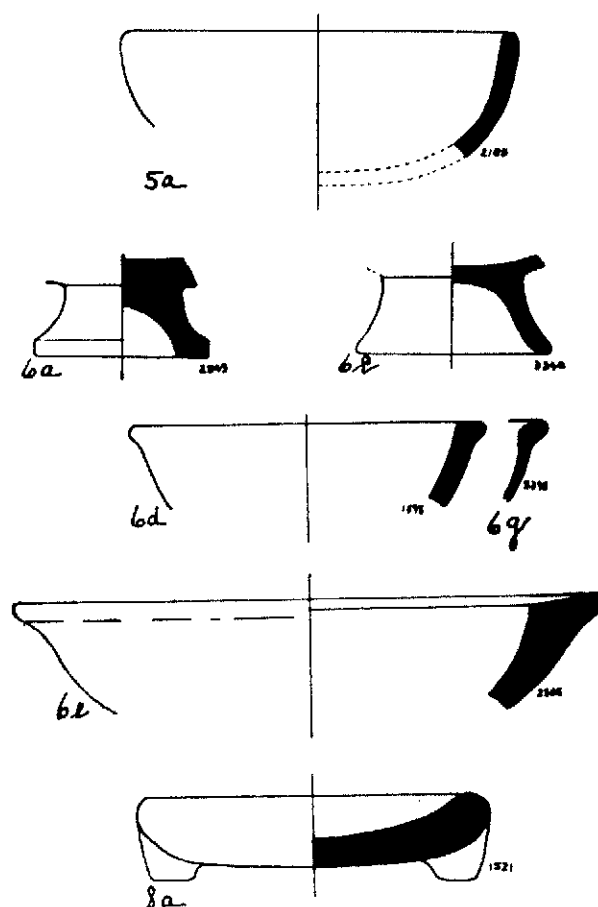
208. Limestone vessels, types 1-4. Scale, 1:4.

3. Heavy saucer, possibly for same purpose as No. 2, but with deeper, wider hollow.  
 a. Reg. No. 2958, S. G. T. 1, June 22, 1910.  
 4. Plate, with disc base, ornamented inside on bottom with a rosette or unornamented.  
 a. Reg. No. 1704 (unornamented), S2-7 sub Roman, Oct. 25, 1909. Diam., 10 cm.  
 b. Reg. No. 2506, S3 d, Oct. 11, 1909.

- c. Reg. No. 3076, S2 under portico pavement, June 25, 1910.  
 d. Reg. No. 3322, S5 b, July 4, 1910.

5. Deep bowl with plain rim, fine pink limestone.

- a. Reg. No. 2185, S3 c W, Oct. 5, 1909. Diam., about 20 cm.

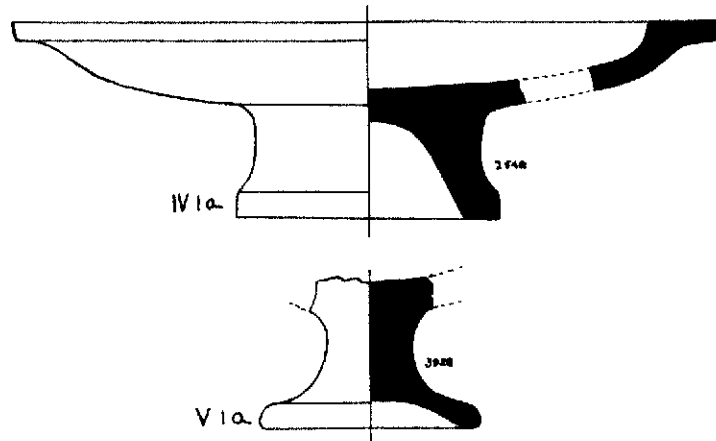


209. Limestone vessels, types 5-8. Scale, 1:4.

6. Bowl on a stand (see IV 1, below). The stand is of one piece with the bowl and is hollowed. The bowl has a broad flat rim, undercut outside.  
 a. Reg. No. 2549 (stand), L. T. 53 cistern, Oct. 13, 1909. Diam., 9 cm.  
 b. Reg. No. 3172 (stand), S5 a, June 30, 1910. Diam., 6.5 cm.  
 c. Reg. No. 3340 (stand), S5 g, July 6, 1910. Diam., 10 cm.  
 d. Reg. No. 1675 (rim), S2 II 311, Sept. 4, 1909.  
 e. Reg. No. 2505 (rim), S3 d, Oct. 11, 1909. Diam., 30 cm.  
 f. Reg. No. 2800 (rim), Cl. T., Aug. 10, 1909. Diam., 22 cm.  
 g. Reg. No. 3395 (rim), S5 h, July 8, 1910.  
 h. Reg. No. 3428 (rim), S5 h, July 11, 1910.  
 i. Reg. No. 3642 (rim), S6 a, July 27, 1910.  
 7. Fragment of plate of indeterminable form, broken in antiquity and mended with bronze band.  
 a. Reg. No. 1933, L. T. 1 c, Aug. 25, 1909.  
 8. Fragment of three-legged brazier.  
 a. Reg. No. 1521, H. S. 1, June 22, 1909. Diam., 9 cm.

## IV. SERPENTINE(?)

This soft, brown, mottled stone was used in Egypt for various small cosmetic vessels during the New Empire and later.

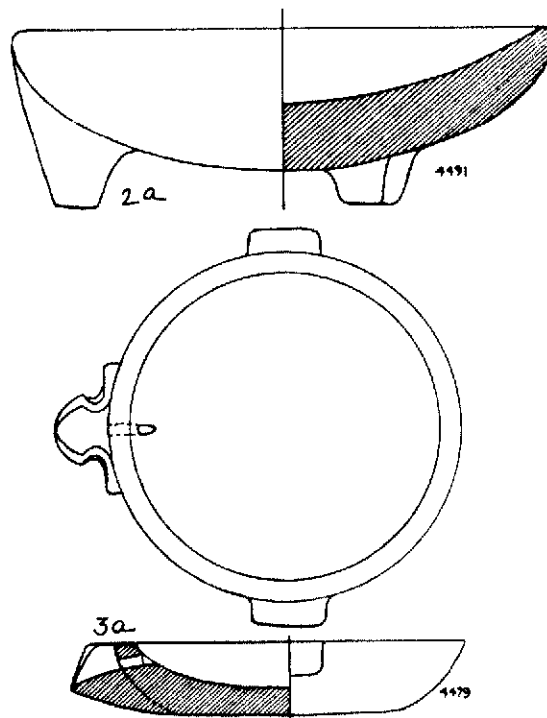


210. Serpentine vessel, type IV 1 a, and basalt vessel, type V 1 a. Scale, 1:4.

1. Bowl on a stand (see III 6, above, and V 1, below).
  - a. Reg. No. 2548 (rim and base), L. T. 53 cistern, Oct. 13, 1909. Diam. of base, 13.2 cm.; of bowl, 36 cm.
  - b. Reg. No. 3175 (rim), S5 a, June 30, 1910.
  - c. Dis. No. 1632, N. G. T. north of N Tower, Aug. 5, 1909. Fragment.

## V. BASALT, GRANULAR BLACK STONE

1. Bowl on a stand (see III 6 and IV 1, above).
  - a. Reg. No. 3928 (stand), S4-417, Aug. 15, 1910. Diam., 12 cm.
  - a. Reg. No. 4491, S8 c, Sept. 13, 1910. Diam., 27.5 cm. See Pl. 80 n.



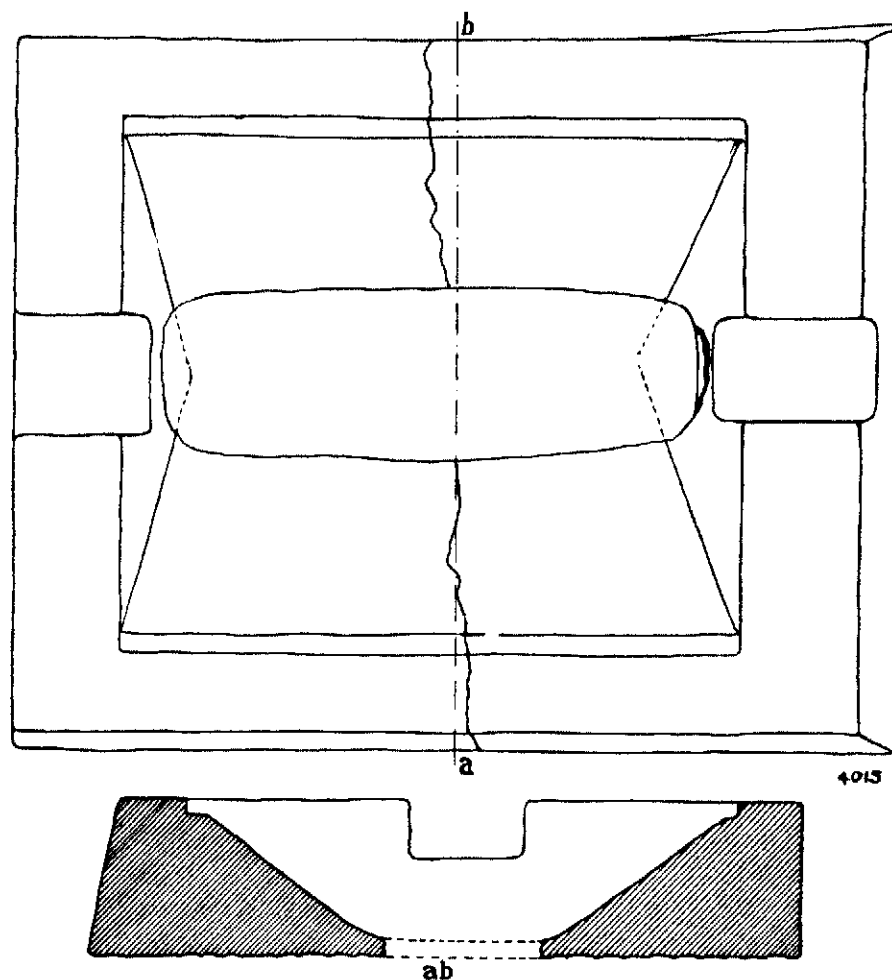
211. Basalt vessels, types 2 and 3. Scale, 1:4.

2. Three-legged brazier or mortar. Fragments were found in black debris in S1, H. S., S8 (7 pieces), S10, S11, L. T., and other places. Only one whole specimen was registered.
3. Mortar with projecting handles and a spout.
  - a. Reg. No. 4479, S8 a, Sept. 12, 1910. Diam., 18 cm. See Pl. 80 o.

4. Rectangular frame, beveled inside to a slit opening on the outside, two square notches for fastenings on the inside. See Bliss-Macalister, p. 143, where it is suggested that a similar object may be a

window-frame. Similar slit windows are known in Egypt as early as the Fifth Dynasty mastabas.

- a. Reg. No. 4015, L. T. 3 to 5, Sept., 1909. Found broken and scattered, but fitted together in 1910.



212. Basalt window, type 4. Scale, 1:4.

#### C. MOLDS FOR CASTING METALS

1. Pottery mold of coarse black-brown ware, with a red wash. The ware seems to be Israelite and the mold was found with Israelite pottery. See Pls. 64 m; 68 l 5.

a. Reg. No. 2934, S. G. T. 1, June 22, 1910.

2. Limestone molds.

a. Reg. No. 1972, L. T. 1 room 6, Aug. 28, 1909. Jeweler's mold. See Pl. 68 n.

b. Reg. No. 4499, S8 b, Sept. 14, 1910. Fragment, 10.8 cm. long.

c. Reg. No. 3614, S6 c, July 25, 1910. Fragment, 5.5 x 3 x 2 cm. One side, cast of a Greek inscription; the other, cast of an object. See Pl. 68 o.

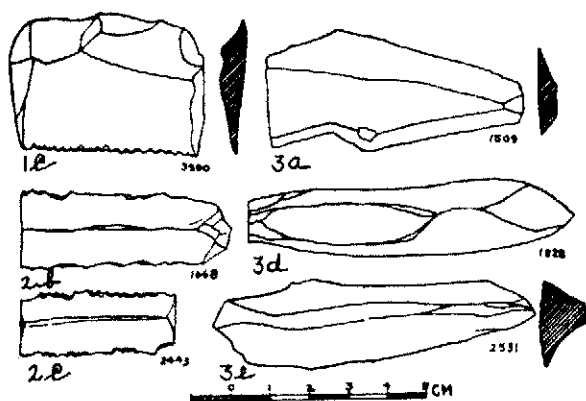
#### D. FLINT AND STONE IMPLEMENTS

##### I. FLINT

Three types of flints were found. As the hill was stripped clear during the construction of the Israelite palace, these flints must have been brought to the place during the subsequent periods. Several of the flints were found in undoubted Israelite debris, and it is probable that flint was in use during the Israelite period. Its use is possible in the Babylonio-Grecian period. The use of flint by ancient races for certain purposes long after the introduction of metal is too well known to require comment, as for example sickle flints in Egypt down to a period contemporaneous with Israelite times. It is possible, of course, that some of the flints came in later with the soil which was brought for purposes of cultivation.

The three types of flints are: (1) single-edged sickle flints, (2) double-edged serrated flints, (3) plain flakes. The last named may be sickle flints in process of manufacture, or they may be cutting implements (circumcision knives?).

1. Single-edged sickle flints. The ridge of the flake is near one edge, forming a blunt, thick back; the other or cutting edge is serrated. These flints were set in a wooden frame.



213. Flints. Scale, 1:2.

- a. Reg. No. 1479, S1 cistern 8, June 21, 1909. Length, 4.5 cm.
- b. Reg. No. 2125, L. T. 5 along Ahab wall, Sept. 30, 1909. L., 4.8 cm. See Pl. 82 g 6.
- c. Reg. No. 3580, S4-356 sub, July 21, 1910. L., 4.8 cm. See Pl. 66 g 2.

2. Double-edged serrated flints. The ridge of the flake is down the middle. These flints are serrated on one or both cutting edges.

- a. Reg. No. 1546, S1 cistern 8, June 17, 1909. L., 5 cm.
- b. Reg. No. 1668, S2 cistern 13, Sept. 3, 1909. L., 5.3 cm.
- c. Reg. No. 2443, S3 d between Israelite and Greek Fort Walls, Oct. 6, 1909. L., 3.9 cm.
- d. Reg. No. 3106, S. G. T. 3, June 26, 1910. L., 8.7 cm.
- e. Reg. No. 3107, S. G. T. 3, June 26, 1910. L., 4.3 cm.
- f. Reg. No. 3604, S6 d, July 25, 1910. L., 10.5 cm. See Pl. 66 g 1.
- g. Reg. No. 3961, S4-421 sub, Aug. 18, 1910. L., 7.6 cm.
- h. Reg. No. 3636, L. T. E., July 26, 1910. L., 4.4 cm. See Pl. 66 g 3.
- i. Reg. No. 1480 (serrated irregular flake), S1 cistern 8, June 18, 1909. L., 8.2 cm.

3. Flint flakes, with sharp unworked edges.

- a. Reg. No. 1509, H. S. 1, June 18, 1909. Size, 6.5 x 3 x 0.4 cm.
- b. Reg. No. 1549, S2 middle, top dirt, July 15, 1909. Size, 9.6 x 5 x 0.7 cm.
- c. Reg. No. 1597, S2-45 sub, Aug. 4, 1909. Size, 5.8 x 3.6 cm.
- d. Reg. No. 1828, H. S. 2, July 12, 1909. Size, 8 x 2.2 cm.
- e. Reg. No. 2531, S3-321, Oct. 13, 1909. Size, 8 x 1.9 cm.
- f. Reg. No. 4684, S8-840, Sept. 28, 1910. Size, 7.3 x 3.2 cm.

## II. OTHER STONE IMPLEMENTS

There were found also three stone celts and a macehead, but none of them in ancient debris. These objects, while neolithic in form, are such as we often find in backward communities enjoying the full use of metals, as for example in Nubia of the Middle Egyptian Empire and in the Sudan to-day. Therefore, I hesitate to ascribe to the examples found at Samaria a date previous to the Israelite occupation of the hill.

1. Axe-head with rounded butt and straight edge.

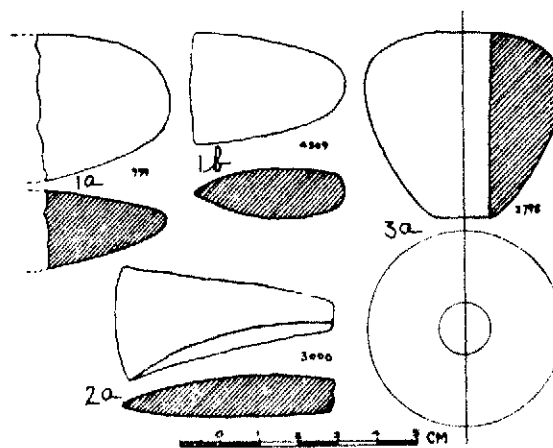
- a. Reg. No. 999 (butt only), Bas. 2d stratum, July 3, 1909. Size, 3.3 x 3.7 x 2 cm.
- b. Reg. No. 4509, S8 d, Sept. 15, 1910. Size, 3.9 x 2.9 x 1.2 cm. Hard green stone.

2. Small celt with rectangular section.

- a. Reg. No. 3000, S. G. T. 2, June 23, 1910. Size, 5.5 x 2.9 x 1 cm. Hard gray-black stone.

3. Mace head of bulbous form (Egyptian form).

- a. Reg. No. 2798, Roadway, July, 1909. H., 4.6. Diam., 4.8 cm. Marble.



214. Stone implements. Scale, 1:2.

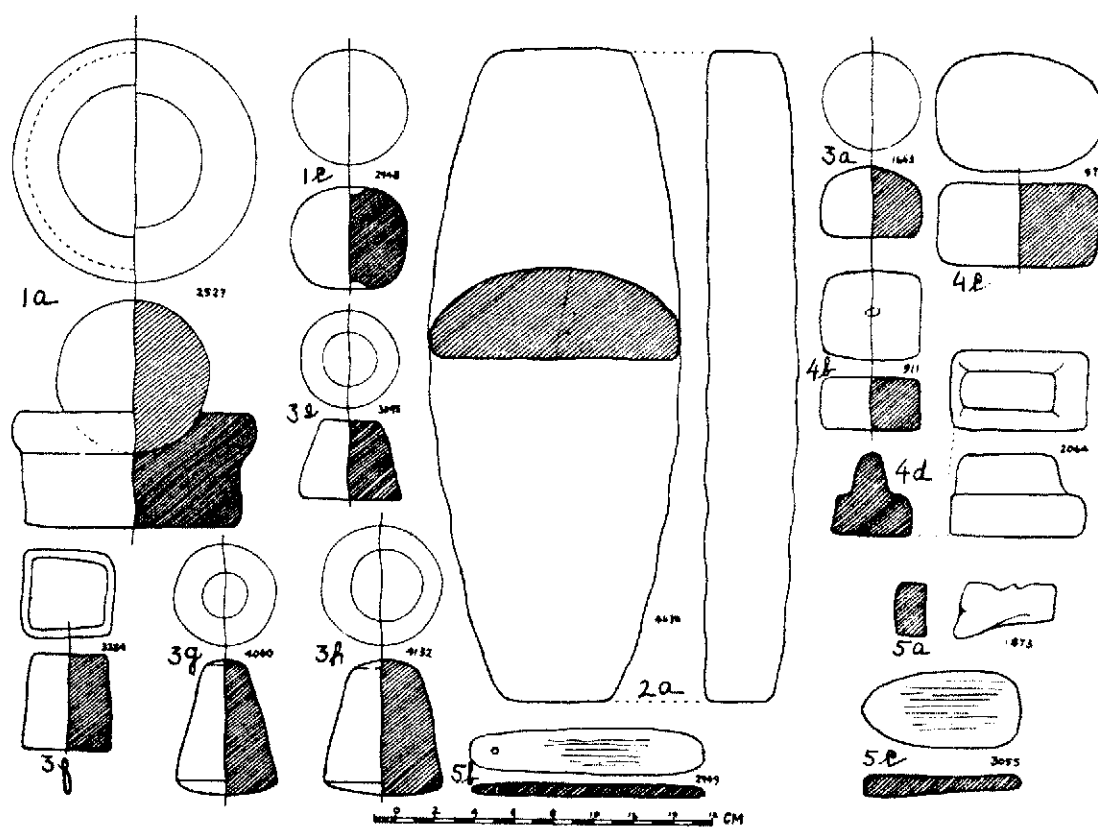
## III. RUBBING STONES, POUNDERS, AND SHARPENING STONES

The usual rubbing, grinding and pounding stones common to all parts of the ancient Orient were found. One conical pestle (3 f, below) was found in debris containing Israelite potsherds, but the rest were all in black debris.

## 1. Mortar and ball pestle.

- a. Reg. No. 2527, S3-320, Oct. 12, 1909. See Pl. 80 f. Mortar was of black basalt; ball a flint nodule. Found together. Diam. of mortar, 11 cm.; of ball, 8 cm.
- b. Reg. No. 2816 (ball only), N. G. T. 5, June 15, 1910.
- c. Reg. No. 2948 (ball only, two finger-hollows on opposite sides), S. G. T. 6, June 22, 1910. Diam., 5 cm. Black stone. See Pl. 68 i 3.
- d. Reg. No. 2986 (ball only), S. G. T. 4, June 23, 1910. Diam., 5 cm. Black stone.
- e. Reg. No. 1522 (ball only), H. S. 1, June 22, 1909. Diam., 5.2 cm. Basalt.

- c. Reg. No. 2479, S3-314, Oct. 8, 1909. Diam., 5.8 cm.; h., 5.4 cm.
- d. Reg. No. 2852, N. G. T. 8, June 17, 1910. H., 7 cm.
- e. Reg. No. 3095, S. G. T. 4, June 26, 1910. H., 7 cm.
- f. Reg. No. 3254 (truncated pyramid), S5 f, July 2, 1910. H., 5 cm.
- g. Reg. No. 4060 (white and red breccia), N. G. T., July 31, 1909. H., 6.6 cm.
- h. Reg. No. 4132, S7-711 sub, Aug. 27, 1910. H., 6.6 cm.
- i. Reg. No. 4442, Samarra's Land c 1, Sept. 8, 1910. H., 7 cm.



215. Rubbing stones, pounders, and sharpening stones. Scale, 1:4.

2. Flat grinding stone, nearly oval in form, of black basalt. This is the smaller upper stone; the lower stone was not found. See Bliss-Macalister, p. 143. This form is used in Nubia at the present day.

- a. Reg. No. 4638, S8-880, Sept. 24, 1910.

3. Rubbing stones, pyramidal or conical in form, of hard stone.

- a. Reg. No. 1663, S2-43 sub, Sept. 1, 1909. Diam., 5 cm.
- b. Reg. No. 2072, L. T. 5 b, Sept. 14, 1909. H., 6.2 cm.

4. Rubbing stones of various forms.

- a. Reg. No. 910, Bas. 2d stratum, June 22, 1909. Size, 5.6 x 4 x 3.2 cm. Basalt.
- b. Reg. No. 911, same place as a, same date. Size, 5 x 4.6 x 2.6 cm., rectangular. Hard red stone, fine grained.
- c. Reg. No. 979, Bas. 2d stratum, June 28, 1909. Size, 8.2 x 6 x 4.1 cm., flat oval. Basalt.
- d. Reg. No. 2064, L. T. 5 b, Sept. 13, 1909. Size, 6.8 x 4 x 4.1 cm., flat rectangle with knob-handle on top. Basalt.
- e. Reg. No. 2170, S3 f, Oct. 6, 1909. Hard black stone. Diam., 6 cm.; h., 3.2 cm.

- f. Reg. No. 3416, N. G. T. 12, July 11, 1910. Size, 4 x 2.3 x 1.3 cm., rectangular. Slate.
- f.<sup>1</sup> Reg. No. 3969, Kaid's Land a, Aug. 18, 1910. Basalt. L., 5 cm.
- g. Reg. No. 4484, Samarra's Land, Sept. 13, 1910. Size, 6.1 x 3.2 x 4.7 cm., irregular. Basalt.
- h. Reg. No. 1663, S2-43, Sept. 1, 1909. H., 3.5 cm.; diam., 5 cm. Nearly hemispherical. Basalt.
- 5. Sharpening stones.
  - a. Reg. No. 1873, L. T. 1 b, Aug. 18, 1909. Size, 5.2 x 1.6 x 2.7 cm. Irregular form. Grooved by rubbing. Slate.
  - b. Reg. No. 2969, S. G. T. 4, June 23, 1910. Size, 10.8 x 3.3 x 0.6 cm. Flat worn whetstone, with hole for suspension through one side. Slate.
  - c. Reg. No. 3055, S. G. T. 4, June 25, 1910. Size, 8 x 4 x 0.7 cm. Flat whetstone.
- 6. Polishing stones. See the small hemispherical pieces of hematite under H. 1, below, Fig. 217.
  - a. Reg. No. 4519, Kaid's Land, Sept. 15, 1910. Ovoid piece of hematite, with one flat side and a groove lengthwise of the other side. Size, 3.5 x 1.7 x 1.1 cm.

## E. WHORLS OR BUTTONS

All over the site, in all classes of debris, whorl-shaped objects were found of dark gray soapstone, black slate, white limestone, bone, glass, or pottery. They vary in form from a hemisphere to a flat disc and from a true cone to a cone with concave or convex sides (see Pl. 83 j). The size varies from two to four centimetres in diameter. These appear to be spinning whorls, but Professor Macalister (Gezer, II, p. 91), on account of their small size and the narrowness of the hole, expresses the opinion that they are buttons, fastened with a knotted string. If, however, a metal or bone spindle were used (some of the unexplained, hook-ended bronze pins, for example), the small stone whorls would make very serviceable spinning whorls. However, the explanation of their use as buttons is very plausible, especially in the case of the bone and ivory specimens which shade off into flat discs and ring beads.

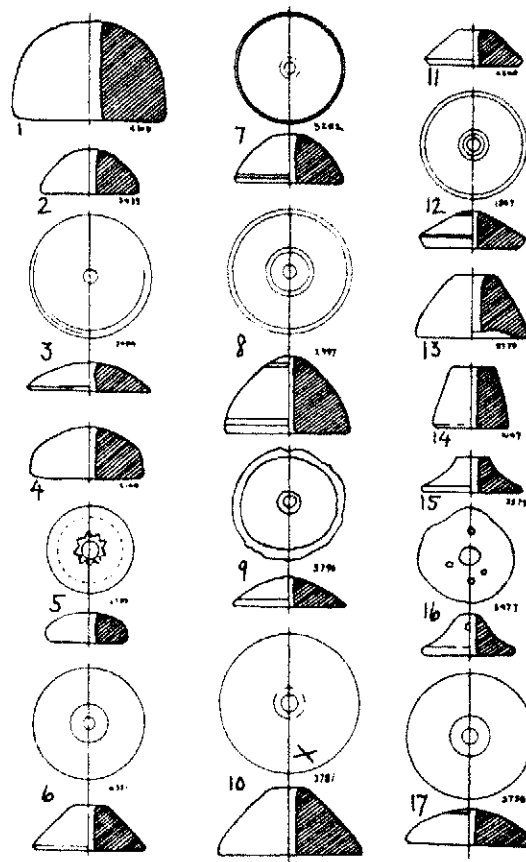
The following selection will give a good idea of their distribution over the site. They appear to occur in deposits of all periods, but most frequently in the Hellenistic debris. For glass whorls, see Chapter XI C II and III; for bone whorls, see Chapter X J.

## 1. Whorls or Buttons.

- a. Reg. No. 830, Bas. 2d stratum, June 8, 1909. Gray stone. Diam., 3.3 cm.
- b. Reg. No. 938, Bas. 2d stratum, June 24, 1909. Green gray stone. Diam., 2.3 cm.
- c. Reg. No. 1361, Bas. E, cut, July 1, 1909. Black stone. Diam., 2 cm.
- d. Reg. No. 1391, Bas. cist. 1, July 20, 1909. Gray stone. Diam., 2.7 cm.
- e. Reg. No. 1735, vault cist. 2, Aug. 23, 1909. Black polished gray paste. Diam., 2 cm.
- f. Reg. No. 1887, L. T. 1 a W, Aug. 20, 1909. Slate. See Fig. 216, No. 12.
- g. Reg. No. 1898, L. T. 1 d, Aug. 20, 1909. Limestone. Diam., 2.9 cm.
- h. Reg. No. 1931, L. T. room 15, Aug. 25, 1909. Slate. Diam., 2.5 cm.
- i. Reg. No. 1952, L. T. 1 a, Aug. 17, 1909. Black polished gray paste. Diam., 2.7 cm.
- j. Reg. No. 1994, L. T. 1 c, Sept. 1, 1909. Limestone. Diam., 3.2 cm.
- k. Reg. No. 2042, L. T. room 39, Sept. 9, 1909. Black stone. Diam., 3.2 cm.
- l. Reg. No. 2044, L. T. 21 sub, Sept. 9, 1909. Gray paste. Diam., 2.1 cm.
- m. Reg. No. 2061, L. T. room 25, Sept. 13, 1909. Slate. Diam., 3 cm.
- n. Reg. No. 2063, L. T. room 37, sub Roman, Sept. 13, 1909. Slate. Diam., 2.8 cm.
- o. Reg. No. 2074, L. T. room 5, Sept. 14, 1909. Gray paste. Diam., 2 cm.
- p. Reg. No. 2103, L. T. room 22, Sept. 14, 1909. Slate. Diam., 2.8 cm.
- q. Reg. No. 2779, L. T. room 53 cistern, Oct. 13, 1909. Slate. See Fig. 216, No. 13.
- r. Reg. No. 2780, L. T. room 53 cistern, Oct. 13, 1909. Slate. Diam., 2.6 cm.
- s. Reg. No. 2784, L. T. room 53 cistern, Oct. 13, 1909. Red breccia. Diam., 2 cm.
- t. Reg. No. 2785, L. T. room 53 cistern, Oct. 13, 1909. Slate. See Fig. 216, No. 5.
- u. Reg. No. 3477, L. T. E., July 13, 1910. Gray stone. See Fig. 216, No. 16.
- v. Reg. No. 2147, S3 g S, Sept. 30, 1909. Slate. See Fig. 216, No. 14.

- w. Reg. No. 2148, S3 g S, Sept. 30, 1909. Slate. See Fig. 216, No. 4.
- x. Reg. No. 2196, S3 b street, Oct. 6, 1909. Slate. Diam., 2.2 cm.
- y. Reg. No. 2528, S3 along Ahab wall, Oct. 13, 1909. Gray paste. Diam., 2.4 cm.
- z. Reg. No. 2781, S3-324, Oct. 12, 1909. Black stone. Diam., 2.5 cm.
- aa. Reg. No. 2782, S3-303, Oct. 17, 1909. Slate. Diam., 2.3 cm.
- bb. Reg. No. 2607, S4 e E, Oct. 27, 1909. Buff paste. Diam., 3.9 cm.
- cc. Reg. No. 2777, Gateway SW Tower, Aug. 17, 1909. Slate. Diam., 3.9 cm.
- dd. Reg. No. 2778, Gateway house inside, Aug. 16, 1909. Slate. Diam., 2.6 cm.
- ee. Reg. No. 2840, N. G. T. 4, June 16, 1910. Slate. Diam., 2.1 cm.
- ff. Reg. No. 2874, S. G. T. 4, June 20, 1910. Slate. Diam., 2 cm.
- gg. Reg. No. 2974, S. G. T. 4, June 23, 1910. Slate. Diam. 3 cm.
- hh. Reg. No. 2997, S. G. T. 2, June 23, 1910. Slate. See Fig. 216, No. 8.
- ii. Reg. No. 2996, N. G. T. 2, June 23, 1910. Slate. Diam., 3.2 cm.
- jj. Reg. No. 3031, S. G. T. 1, June 24, 1910. Gray stone. Diam., 3.1 cm.
- kk. Reg. No. 3054, S. G. T. 4, June 24, 1910. Slate. See Fig. 216, No. 3.
- ll. Reg. No. 3161, S. G. T. 3, June 29, 1910. Slate. Diam., 1.9 cm.
- mm. Reg. No. 3167, N. G. T. 4, June 29, 1910. Slate. Diam., 2.6 cm.
- nn. Reg. No. 3435, S5-361, July 12, 1910. Slate. See Fig. 216, No. 2.
- oo. Reg. No. 3174, S5 a, June 30, 1910. Slate. Diam., 3 cm.
- pp. Reg. No. 3202, S5 a, June 30, 1910. Slate. See Fig. 216, No. 7.
- qq. Reg. No. 3317, S5 b, July 4, 1910. Gray stone. Diam., 23 mm.
- rr. Reg. No. 3579, S6 f, July 21, 1910. Slate. See Fig. 216, No. 15, and Pl. 83 j 3.
- ss. Reg. No. 3615, S6 g, July 25, 1910. Stone. Diam., 2.3 cm., and Pl. 83 j 6.
- tt. Reg. No. 3803, S6 e, Aug. 9, 1910. Gray stone. Diam., 3.1 cm. See Pl. 83 j 7.
- uu. Reg. No. 3951, S6-626, Aug. 17, 1910. Gray stone. Diam., 2.9 cm.
- vv. Reg. No. 3748, S7 d, Aug. 5, 1910. Black stone. Diam., 2.6 cm. See Pl. 83 j 8.
- ww. Reg. No. 3781, S7-406 sub, Aug. 6, 1910. Gray stone. See Fig. 216, No. 10, and Pl. 83 j 4.
- xx. Reg. No. 4115, S7-720 sub, Aug. 25, 1910.
- yy. Reg. No. 4444, S7-365, sub deep, Sept. 9, 1910. Limestone. Diam., 4 cm.
- zz. Reg. No. 4618, S7-772, Sept. 22, 1910. Limestone. See Fig. 216, No. 1.
- ab. Reg. No. 4539, S8 802 sub, Sept. 17, 1910. Black stone. Diam., 2.8 cm.
- ac. Reg. No. 4567, S8 d N deep, Sept. 19, 1910. Black stone. Diam., 2.3 cm.
- ad. Reg. No. 4726, S8-840 cave, Sept. 30, 1910. Black stone. Diam., 1.7 cm.
- ae. Reg. No. 4393, S9-906 sub, Sept. 6, 1910.

- Black stone. Diam., 2.7 cm.
- af. Reg. No. 4163, S10 b, Aug. 31, 1910. Gray stone. Diam., 2.4 cm.
- ag. Reg. No. 4560, S10 a, Sept. 19, 1910. Gray stone. See Fig. 216, No. 11.



216. Whorls or buttons. Scale, 1:2.

- ah. Reg. No. 4840 (hole begun but not bored through), S11-1, Oct. 12, 1910. Red-veined limestone. Diam., 3.4 cm.
- ai. Reg. No. 3758, Kaid a, Aug. 5, 1910. Pottery. See Fig. 216, No. 17; Pl. 83 j 5.
- aj. Reg. No. 3796, Kaid a, Aug. 8, 1910. Gray stone. See Fig. 216, No. 9; Pl. 83 j 2.
- ak. Reg. No. 3797, Kaid's Land, Aug. 8, 1910. Black stone. Diam., 3.4 cm. See Pl. 83 j 9.
- al. Reg. No. 4480, Kaid's Land, Sept. 12, 1910. Slate. Diam., 3 cm.
- am. Reg. No. 4289, Samarra's Land b 5, Sept. 5, 1910. Black stone. Diam., 2.5 cm.
- an. Reg. No. 4351, Samarra's Land a 5, Sept. 5, 1910. Slate. See Fig. 216, No. 6.
- ao. Reg. No. 4352, Samarra's Land a 5, Sept. 5, 1910. Black stone. Diam., 2.2 cm.
- ap. Reg. No. 4456, Samarra's Land c, Sept. 10, 1910. Black stone. Diam., 1.9 cm.

## 2. Other whorls.

- a. Reg. No. 3702, S4 E under Herodian street, Aug. 1, 1910. A gray stone ring. Diam., 5 cm. See Pl. 83 j 1.
- b. Reg. No. 4162, S7-722, Aug. 31, 1909. Hard white limestone disc. Diam., 4.2 cm.; 1.7 cm. thick. Diam. of hole, 8 mm.
- c. Reg. No. 961, Bas. 2d stratum, June 25, 1909. Pottery disc cut from a tile. Diam., 5.2 cm.; 1.6 cm. thick. Diam. of hole, 7 mm.



## F. WEAVER'S WEIGHTS

Almost as common as the whorls were the heavy weights of baked clay, unbaked clay, or stone, used in weaving. These were usually like a narrow truncated pyramid in form, pierced with one hole near the top, but some were like truncated cones, and a few were rather irregular in form. The following list of selected weights will give an idea of the distribution over the site. They appear to have been most common in the Hellenistic period. Their height varies from 6-12 cm.

## 1. Conical or Pyramidal Weights.

- a. Reg. No. 1514 (conical), H. S. 1, June 22, 1909.
- b. Reg. No. 1852, S2 II 7 upper stratum, July 31, 1909.
- c. Reg. No. 1915 (stone), L. T. 1 b cistern 2, Aug. 23, 1909.
- d. Reg. No. 2047, L. T. 4-46, Sept. 10, 1909.
- e. Reg. No. 2394, S3 d, Sept. 23, 1909. See Pl. 68 g 6.
- f. Reg. No. 2402, S3 f S, Sept. 27, 1909. See Pl. 68 g 5.
- g. Reg. No. 2407, S3 c, Sept. 30, 1909. See Pl. 68 g 4.
- h. Reg. No. 2412 (stone, round-topped cone), S3 e, Oct. 2, 1909. See Pl. 68 g 3.
- i. Reg. No. 2413 (clay, round-topped cone), S3 e, Oct. 2, 1909. See Pl. 68 g 2.
- j. Reg. No. 2593, S3-321, Oct. 22, 1909.
- k. Reg. No. 2931 (flat stone), S. G. T. 8, June 22, 1910.
- l. Reg. No. 2999, S. G. T. 2, June 22, 1910.
- m. Reg. No. 3726 (23 weights, unbaked clay, illegible seal impression on top), S4-201 sub, Aug. 3, 1910.
- n. Reg. No. 3287, S5 c, July 2, 1910.
- o. Reg. No. 4205, S8 b (-250 cm.), Sept. 3, 1910. Like g, above.
- p. Reg. No. 4390, S9-906 sub, Sept. 6, 1910. Like g, above.
- q. Reg. No. 4391, S9-906 sub, Sept. 6, 1910. Like c, above.
- r. Reg. No. 4454, S7-751, Sept. 10, 1910.
- s. Reg. No. 4692, S10 d, Sept. 27, 1910.
- t. Reg. No. 3840, S7 b, Aug. 10, 1910. A rough, rectangular block of limestone, 9 x 7.4 x 8.6 cm. high, pierced with a large hole from top to bottom. Diam., 1.8 cm.

## 2. Disc-weight. Fine reddish-buff ware, wet-smoothed. Pierced before baking by two holes on one side. Disc made for the purpose, not cut from a made pot.

- a. Reg. No. 3142, S5 a, June 29, 1910. Diam., 9 cm.

## G. BALL WEIGHTS

A number of rough balls were found of clay or stone, pierced for suspension. These were lighter than the weaver's weights described above, but may have been used for some similar purpose. They are too large and too rude to have been beads. Many of them were of unbaked clay. One only was cylindrical in form (No. 1 p, below), and this was found in Israelite debris. The others were found usually in the older black debris, and appear to belong to the Babylonio-Grecian period as well as to the Hellenistic.

## 1. Clay weights.


- a. Reg. No. 1633, S2-43 sub, Aug. 28, 1909.
- b. Reg. No. 1897, L. T. 3 d, Aug. 20, 1909.
- c. Reg. No. 2183, S3 c W, Oct. 5, 1909.
- d. Reg. No. 2529, S3-321, Oct. 13, 1909.
- e. Reg. No. 2879, S. G. T. 3, June 20, 1910.
- f. Reg. No. 2894, S. G. T. 3, June 21, 1910.
- g. Reg. No. 2921, S. G. T. 3, June 21, 1910.
- h. Reg. No. 2949, S. G. T. 1, June 22, 1910. See Pl. 68 l 1.
- i. Reg. No. 2950, S. G. T. 1, June 22, 1910. See Pl. 68 l 2.
- j. Reg. No. 2959, S. G. T. 1, June 22, 1910. See Pl. 68 l 7.
- k. Reg. No. 2962, S. G. T. 1, June 22, 1910. See Pl. 68 l 4.
- l. Reg. No. 2963, S. G. T. 1, June 22, 1910. See Pl. 68 l 6.
- m. Reg. No. 4395, S9-906 sub, Sept. 6, 1910.
- n. Reg. No. 4467, S7-766, Sept. 12, 1910.
- o. Reg. No. 4468, S7-755, Sept. 12, 1910.
- p. Reg. No. 3924 (cylindrical), S4-417, Aug. 16, 1910.

## 2. Stone weights.

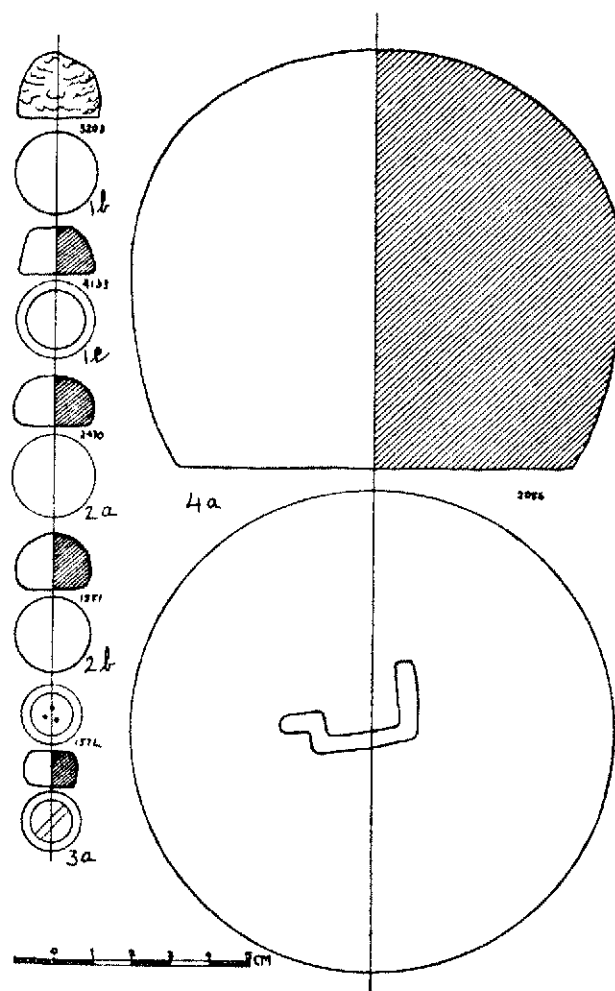
- a. Reg. No. 2896, S. G. T. 3, June 21, 1910. Pebble, pierced through middle of flat side. 4.5 x 3.2 x 2.1 cm.
- b. Reg. No. 3407, S5 h E, July 9, 1910. Flat oval pebble, pierced through upper end, 5 x 3.6 x 1.8 cm.

## H. WEIGHTS FOR SCALES

Only a few objects were found which might be classed as weights for scales. Some of these, of hæmatite, had only one smooth surface, and might have been small rubbing pestles. Unfortunately, in the press of work, none of these were weighed.

1. Small hæmatite weights or rubbers.
  - a. Reg. No. 4610, S7-772, Sept. 21, 1910. Size, 13 x 14 x 11 mm. Under-side smoothed and marked with a small circle.
  - b. Reg. No. 3203, S5 e, June 30, 1910. H., 16 mm.; diam., 16 mm. Under-side smoothed.
  - c. Reg. No. 4133, S7-711 sub, Aug. 27, 1910. H., 13 mm.; diam., 19 mm. Smoothed, truncated cone.
2. Small hemispherical weights.
  - a. Reg. No. 2470, S3 street W, Oct. 8, 1909. H., 13 mm.; diam., 20 mm. Hard black stone.
  - b. Reg. No. 1551, S2-55 on floor, with Seleucid water jar and coin of Tyre (see below, Greek Coin Catalogue IV 10 h, 76-5 B.C.). Red and white streaked stone. H., 1.4 cm.; diam., 1.8 cm. See Pl. 68 c 2.
3. Small barrel-shaped weight, with three small holes on one flat side.
  - a. Reg. No. 1572, S2 middle top dirt, July 26, 1909. Hæmatite. H., 8 mm.; diam., 12 mm.
4. Spheroidal limestone weight, with one flattened side.
  - a. Reg. No. 2056, L. T. 1 c, Aug. 26, 1909. H., 10.6 cm.; diam., 12.4 cm. The top is marked with a sign .

See also bronze weights, Chapter IX B XIII.



217. Stone weights. Scale, 1:2.

## I. RAW MATERIALS

The most interesting of the raw materials recovered was the blue glass, found usually in Israelite debris or in mixed Israelite and early Greek debris. An especially large number of broken slabs of this glass was found in S2 rooms 41-47 in mixed yellow and black debris about one metre above the rock. In Egypt, blue glass of this sort was ground to a fine powder and mixed with a matrix to form the blue pigment, which was used from the Old Empire to Roman times. Lumps of a blue paste (see No. 2 a, below), similar to the Egyptian crystalline blue, were found near the glass slabs in S2 room 42; and there can be no doubt that the rough blue slabs were used for grinding the blue powder of which the blue paste was made. Without a suitable matrix the powder would not show its color.

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Blue glass, slabs and splinters, thick white patina.           <ol style="list-style-type: none"> <li>a. Reg. Nos. 1617, 1634, 1662, 4066-4071, all found in S2-41 to 47, Aug. 25-30, 1909.</li> </ol> </li> </ol> | <ol style="list-style-type: none"> <li>2. Blue paste, color.           <ol style="list-style-type: none"> <li>a. Reg. No. 1653, S2-42 near rock, Aug. 31, 1909. Seven small lumps.</li> </ol> </li> </ol> |
|--|---|

- b. Reg. No. 4453, S4-356 sub, under Roman wall, Sept. 10, 1910. Lump; greatest dimension, 28 mm.
  - c. Reg. No. 4490, S8-803 sub, Sept. 13, 1910. Three lumps; greatest dimension, 20 mm., 14 mm., and 7 mm.
  - d. Reg. No. 4861, S11-1 deep, Oct. 14, 1910. Lump; greatest dimension, 20 mm.
3. Pitch (resin?).<sup>1</sup>
- a. Reg. No. 4518 and 4534, S7-773 deep, Sept. 15-16, 1910. Seven lumps; greatest dimension of largest lump, 36 mm.
- 4. Sulphur (?)
    - a. Reg. No. 940, Bas. 2d stratum, June 24, 1909. Small lump.
  - 5. Haematite.
    - a. Reg. No. 4859, S11 x, Oct. 14, 1910. Irregular lump; greatest dimension, 30 mm.
  - 6. Crystal, natural, quartz.
    - a. Reg. No. 3953, S4-349 sub, Aug. 17, 1910. Size, 4.6 x 1.1 x 0.6 cm.

## J. SHELLS

- 1. The common cowrie was found at Sebaste in a number of different places and periods. The only example deserving special mention was a cowrie with the top cut off after the Egyptian manner (when they were used as beads). This cowrie was found in the floor debris of the Ahab courtyard, and was undoubtedly used in the Israelite period.
  - a. Reg. No. 4013, S4-417 sub, Aug. 20, 1910.
- 2. A small bivalve shell, easily mistaken for alabaster, was common also.
  - a. Reg. No. 858, Bas. 2d stratum, June 12, 1909. Pierced.
- b. Reg. No. 2937, N. G. T. 3, June 22, 1910. Pierced.
- 3. Murex shells were not frequent.
  - a. Reg. No. 861, Bas. 2d stratum, June 12, 1909. Long type, 10 cm. long (broken).
  - b. Reg. No. 876, Bas. 2d stratum, June 14, 1909. Short type, 6 cm. long (broken).
  - c. Reg. No. 917, Bas. 2d stratum, June 23, 1909. Short type, 5.3 cm. long.
  - d. Dis. No. 1151, S11-6, Oct. 10, 1910. Long type, 13.5 cm. long.

<sup>1</sup>This resembled the Egyptian mummy pitch, which appears to be resin. See A. Lucas, *Preservative Materials used by the Ancient Egyptians in Embalming*, p. 49.

## CHAPTER IX

### METALS

Of all the metal objects found, only iron arrow-heads (1 a, 2 a, 3 d, 5 a, below) came from undisturbed Israelite debris. Most of the iron arrow-heads were found in yellow debris of one sort or other, and appeared to be Israelite or early Post-Israelite in date. While nothing else of metal was certainly Israelite, many of the commoner bronze and iron objects were also found in mixed debris, and may well have been Israelite or at least early Post-Israelite. I would suggest the following as previous to 300 B.C. in date:

Iron arrow-heads, 1 a-d; 2 a, b; 3 a-d; 5 a-c; 11 e.	Bronze pins, etc., 3 a; 3 e; 5 a.
Iron spear points, 1 a.	Bronze brooches, 1 a; 2 a; 4 a; 8 a; 11 a; 12 a.
Iron tool, 2 a.	Bronze kohl-sticks, 3 c; 4 a; 6 a; 10 a; 10 d; 10 f; 13 a.
Iron nails, 1 e; 2 h.	Bronze trappings, 1 a; 3 a; 4 a; 5 a; 9 a.
Iron rings, 1 a; 4 e, d.	Bronze chain, 6 a.
Bronze arrow-heads, 1 a.	Bronze handles, 9 a; 17 a.
Bronze nails, 1 e; 6 a; 9 e; 9 d; 10 a.	Bronze wire, 4 a.
Bronze implements, 1 a; 2 a.	

The great majority of the rest of these objects are clearly Hellenistic in date. As Roman, may be pointed out the following:

Iron arrow-heads, 8 a, b.	Bronze brooch, 13 a.
Iron nails, 1 a, c; 2 a-d; 4 a.	Bronze buckle, 3 a; 4 a.
Iron rings, 2 a; 4 a; 5 a.	Bronze kohl-stick, 2 a; 3 a, b; 9 a; 11 a, b.
Bronze nails, 11 a; 12 a.	Bronze chains, 5 a, b.
Bronze implements, 9 a.	Bronze bells, 1 a (two bells).

A review of the whole material makes it evident that the use of bronze reached its highest point in the Hellenistic period (300 to 100 B.C.), the period which in general shows the greatest prosperity at this site.

### A. IRON

#### I. IRON ARROW-HEADS

Of the iron arrow-heads dated with certainty to the Israelite period are 1 a; 2 a; 3 d; 5 a. A majority of the rest were found in debris which contained Israelite potsherds, and were of the fine, oval, leaf shape shown in Fig. 218, No. 1. Only a few were found in Hellenistic debris, and these were of different forms (6 c, d, e; 8 a; 10 a; 11 a, b, c, d). The iron arrow-heads were comparatively rare in the Hellenistic debris, being replaced by the bronze arrow-heads.

1. Flat broad blade with solid haft, broadest part near middle.

- a. Reg. No. 1700, S2 IV 14 in half metre of yellow debris above floor of room, Oct. 25, 1909. L., 68 mm.; w., 17.5 mm. See Pl. 82 j 3.
- b. Reg. No. 3289, S5 c deep, July 2, 1910. L., 71 mm.; w., 19 mm.

- c. Reg. No. 3676, S5 on Israelite tower, July 28, 1910. L., 60 mm.; w., 15 mm.; long haft, 20 mm.
- d. Reg. No. 3869, S6 g, Aug. 13, 1910. L., 76 mm. (haft broken off); w., 22 mm.

2. Flat broad blade, with the broadest part nearer the haft, with solid haft.

- a. Reg. No. 1701, S2 IV 14 in half metre of yellow debris above floor, Oct. 25, 1909. L., 89 mm.; w., 23 mm. See Pl. 82 j 2.
- b. Reg. No. 1702, S2 II 7 deep, Oct. 25, 1909. L., 82 mm.; w., 22 mm. See Pl. 82 j 1.

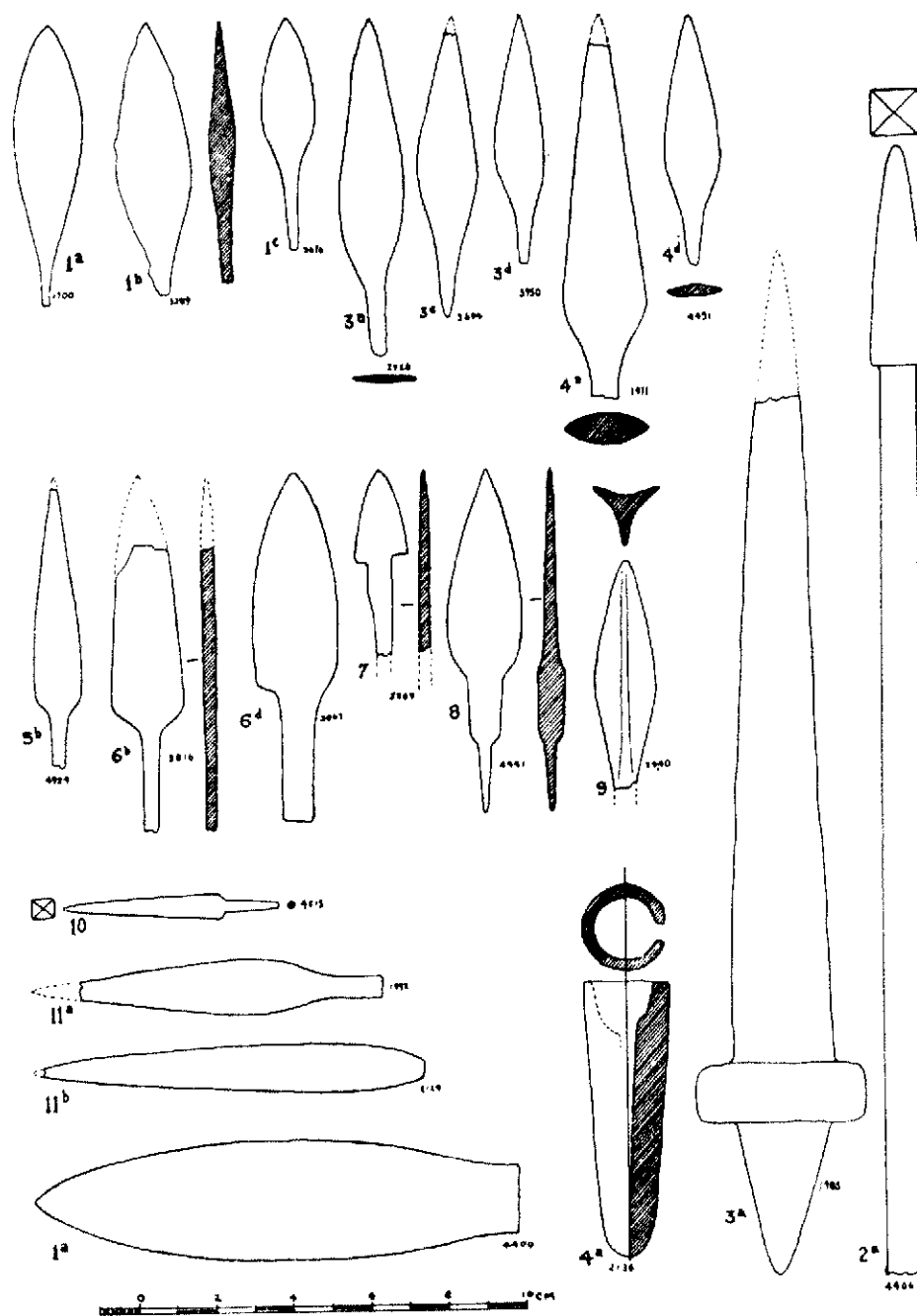
3. Slender flat blade, with solid haft.

- a. Reg. No. 2926, S2 II 7 deep, June 22, 1910. L., 86 mm.; w., 16 mm.
- b. Reg. No. 3503, L. T. E., July 14, 1910. L., 75 mm. (haft broken); w., 16 mm.

- a. Reg. No. 1971, L. T. 1 c, Aug. 27, 1909. L., 91 mm. (both ends broken off); w., 9 mm.
- b. Reg. No. 3228, S5 b, July 1, 1910. L., 63 mm.; w., 12 mm.
- c. Reg. No. 4860, S11-1 S deep, Oct. 14, 1910. L., 79 mm.; w., 10.5 mm. See Pl. 82 a 3.
- d. Reg. No. 4451, Samarra's Land c, Sept. 9, 1910. L., 65 mm.; w., 11 mm.

5. Flat blade, with rounded shoulder at haft end, with solid haft.

- a. Reg. No. 4074, S4-417 sub N, Israelite, Aug. 23, 1910. L., 65 mm.; w., 15 mm.



218. Iron arrow-heads and spear-heads. Scale, 1:2.

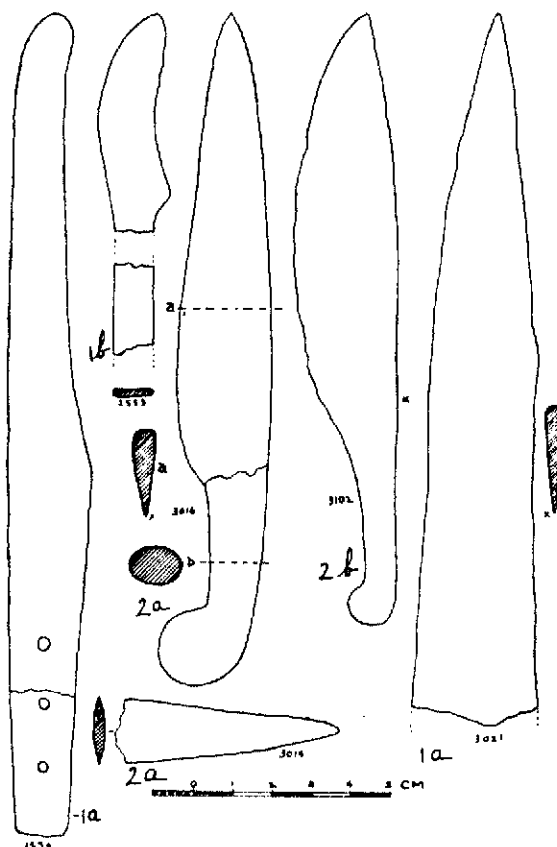
- c. Reg. No. 3694, S4-327, July 30, 1910. L., 73 mm.; w., 17 mm.
- d. Reg. No. 3950, S4-349 sub, Israelite debris, Aug. 17, 1910. L., 65 mm.; w., 14 mm. Print of wooden shaft on haft.

- b. Reg. No. 4924, S11-1 N deep, Oct. 22, 1910. L., 72 mm.; w., 15 mm. See Pl. 82 a 6 (4925).
- c. Reg. No. 4841, S11-22 Israelite wall, Oct. 12, 1910. L., 109 mm.; l. of haft, 26 mm.; w., 15 mm. See Pl. 82 a 5.

4. Long, narrow, flat blade, with broadest part nearer haft, with solid haft.

6. Flat blade, with sharply marked shoulder at haft end, with long solid haft.

- a. Reg. No. 3801, S6 e, Aug. 9, 1910. L., ca. 68 mm.; w., ca. 20 mm.
  - b. Reg. No. 3816, S6 f, Aug. 9, 1910. L., 70 mm. (originally ca. 90 mm.); w., 18 mm.; l. of haft, 30 mm.
  - c. Reg. No. 1671, S2 cistern 13, Sept. 3, 1909. L., 60 mm. (broken); w., 22 mm.
  - d. Reg. No. 2067, L. T. 5, mixed debris, Sept. 14, 1909. L., 90 mm.; l. of haft, 38 mm.; w., 24 mm.
  - e. Reg. No. 2511, S3 street E, Oct. 11, 1909. L., 62 mm.; l. of haft, 21 mm.; w., 14 mm.
7. Broad, triangular flat blade, with long solid haft.
    - a. Reg. No. 3589, S6 e, July 22, 1910. L., 47 mm.; l. of haft, 26 mm.; w., 14 mm.
  8. Flat blade, with collar between blade and haft, with solid haft.
    - a. Reg. No. 4441, Samarra's Land c 1, Sept. 8, 1910. L., 90 mm.; l. of haft, 18 mm.; l. of collar, 16 mm.; w., 20 mm.
    - b. Reg. No. 4445, Samarra's Land c, Sept. 9, 1910. L., 88 mm.; l. of haft, 14 mm.; l. of collar, 20 mm.; w., 18 mm.
  9. Three-sided blade with concave faces, solid haft.
    - a. Reg. No. 2940, N. G. T. 5, June 22, 1910.
  10. Four-sided blade, square shoulder, solid haft.
    - a. Reg. No. 4515, S8-821, Sept. 15, 1910. L., 55 mm.; l. of haft, 13 mm.; blade, 6 mm. square at butt.
- The following on account of their strength may have served as spear-heads:
11. Solid round point tapering to a solid haft.
    - a. Reg. No. 1992, L. T. 1 c slope, Sept. 1, 1909. L., 80 mm. (broken); diam., 15 mm.
    - b. Reg. No. 2124, L. T. 5 under street, Sept. 30, 1909. L., 101 mm.; diam., 12 mm. See Pl. 82 g 4.
    - c. Reg. No. 2856, S. G. T. 1, June 18, 1910. L., 49 mm. (broken off both ends); diam., 12 mm.
    - d. Reg. No. 2965, S. G. T. 3, June 23, 1910. L., 78 mm. (broken off); diam., 17 mm.
    - e. Reg. No. 1541, S1 cistern 7, July 5, 1909. L., 66 mm. (haft broken off); diam., 10 mm. See Pl. 66 a 1.
  12. Round point, hollow butt. Spear or arrow head.
    - a. Reg. No. 2403, S3 a, Sept. 28, 1909. L., 77 mm.; diam., 18 mm.
    - b. Reg. No. 2532, S3 alongside Ahab wall, Oct. 13, 1909. L., 68 mm.; diam., 18 mm.



219. Iron knives (types III 1-2) and sword blades (types IV 1-2). Scale, 1:2.

## II. IRON SPEAR POINTS

1. Thick flat blade, solid haft.
  - a. Reg. No. 4400, S9-913 sub, Sept. 6, 1910. L., 124 mm. (haft broken close to blade); w., 31 mm.; thickness, 9 mm. Babylonio-Grecian.
2. Short four-sided point, with long round haft.
  - a. Reg. No. 4406, S9 cistern 1, Sept. 6, 1910. L., 290 mm.; l. of point, 58 mm.; diam. of haft, 11 mm.; point, 13 mm. square. Hellenistic.

3. Long round point, with ring-guard between point and solid haft.

a. Reg. No. 1485, S1 cistern 8, June 20, 1909. L., 225 mm. (broken both ends); l. of point, 170 mm.; diam. of point, 26 mm.; ring, 15 mm.

wide with diam. of 45 mm. Babylonio-Greco-Hellenistic.

4. Iron shoe for staff. Rolled plate, one end round.

a. Reg. No. 2136, S3 c, Sept. 21, 1909.

### III. IRON KNIVES

1. Flat curved blade, edge on inside of curve, thicker at back, flat haft with rivet holes for fastening to handle. Sickie (?).

a. Reg. No. 1554, S2 S top debris, July 15, 1909. L., 210 mm.; straight part, 9.5 cm.; curved part, 11.5 cm.; w. of straight part, 2.1 cm.; w. of curved part in middle, 1.3 cm. Three rivet holes.

b. Reg. No. 2553, S3 street cistern, Oct. 18, 1909.

Fragment. L., 11.5 cm.; w. of curved part, 2.9 cm. Early Hellenistic.

2. Flat knife, solid handle with knob. Hellenistic.

a. Reg. No. 3016, S2 under portico, June 23, 1910. L., 17 cm; l. of handle, 5 cm.; w. of blade, 2.4 cm. Round handle.

b. Reg. No. 3102, S2 II 68, June 26, 1910. L., 15.4 cm.; l. of handle, ca. 6 cm.; w. of blade, 2.6 cm.

### IV. IRON SWORD BLADES

1. Single-edged blade, with thickened back.

a. Reg. No. 3021, S. G. T. 2, June 24, 1910. Tip; l., 18 cm.; w., 3.2 cm. Sharp tapering point. Hellenistic or earlier.

b. Reg. No. 3817, S6 f, Aug. 9, 1910. Butt with rivet hole, 1.30 cm.; w., 7.5 cm. Hellenistic or earlier.

b. Reg. No. 3690, S4-349 sub, July 30, 1910.

Tapering point. L., 21.6 cm.; w., 4.8 cm. Pre-hellenistic.

c. Reg. No. 2519, S3-324, Oct. 12, 1909. Tapering point. L., 8 cm.; w., 3.4 cm. Hellenistic.

d. Reg. No. 826, Bas. 11 N, June 8, 1909. Fragment. L., 17.5 cm.; w., 5.5 cm.

2. Two-edged blade.

a. Reg. No. 3014, S2 under portico, June 23, 1910. Sharp tapering point. L., 6 m.; w., 1.7 cm. Hellenistic.

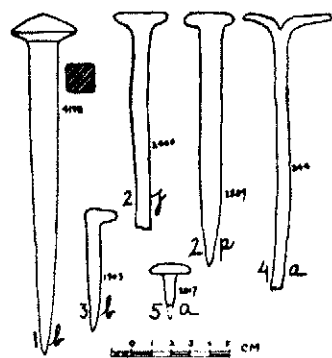
3. Two-edged blade, with ridge down the middle.

a. Reg. No. 2966, S. G. T. 3, June 23, 1910. Fragment. L., 7 cm.; w., 2.5 cm. Hellenistic or earlier.

### V. IRON NAILS. ALL PERIODS

1. Long spike with rounded head and rectangular shaft.

a. Reg. No. 906, Bas. 2d stratum, June 22, 1909. L., 20 mm.; 1.2 x 1.3 cm.



220. Iron nails. Scale, 1:4.

b. Reg. No. 4198, Samarra's Land, Sept. 3, 1910. L., 17.5 cm.; 1.4 cm. square.

c. Reg. No. 1381, Bas. cistern 1, July 20, 1909. L., 18.3 cm. (head gone); 1.1 cm. square.

d. Reg. No. 1504, S2 III 31 above floor, July 9, 1909. L., 14 cm. (lower part only); 1.5 cm. square.

e. Reg. No. 2880, S. G. T. 3, June 20, 1910. L., 5 cm. (top part only); 1 cm. square.

2. Iron nails with flat head. Shaft roughly rounded or squared. Many are broken; hence the plus sign after the length in the following list:

a. Reg. No. 907, Bas. 2d stratum, June 22, 1909. L., 10 cm.

b. Reg. No. 954, Bas. 2d stratum, June 25, 1909. L., 9 cm.

c. Reg. No. 955, Bas. 2d stratum, June 25, 1909. L., 9.7 cm.

d. Reg. No. 977, Bas. 2d stratum, June 28, 1909. L., 10 cm.

e. Reg. No. 1008, Bas. N sub, Roman, July 8, 1909. L., 10.5 cm.

f. Reg. No. 1484, S1 cistern 8, June 20, 1909. L., 12 cm.

g. Reg. No. 1502, S2 II 31, July 9, 1909. L., 11 cm.

h. Reg. No. 1631, S2 II 42 sub, Aug. 28, 1909. L., 6.4 cm.

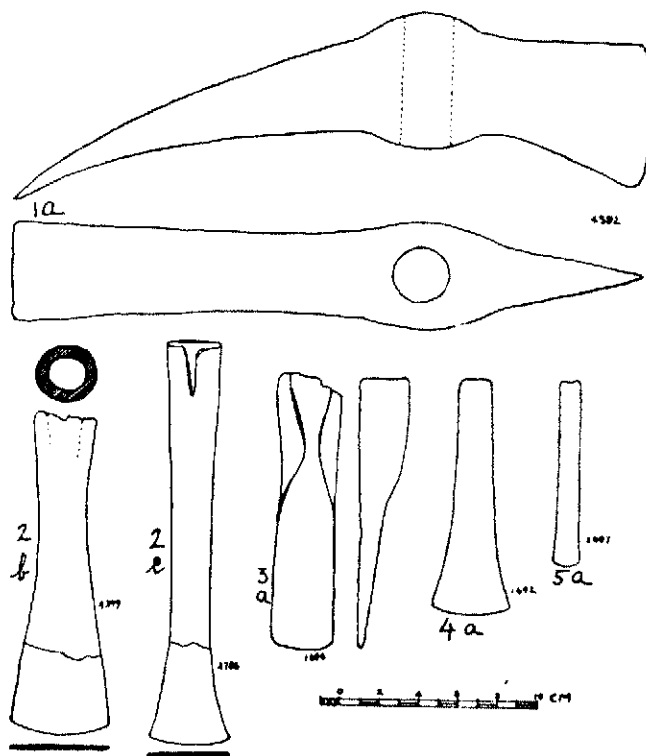
i. Reg. No. 1748, vault cistern 2, Aug. 25, 1909. L., 6.7+ cm.

j. Reg. No. 2440, S3 c W, Oct. 9, 1909. L., 11+ cm. See Pl. 82 i 5.

- k. Reg. No. 2508, S3 street W, Oct. 9, 1909. L., 9.7+ cm.  
 l. Reg. No. 2509, S3 a W, Oct. 11, 1909. L., 8.4+ cm.  
 m. Reg. No. 2516, S3-323, Oct. 12, 1909. L., 9.4+ cm.  
 n. Reg. No. 2552, S3 street cistern, Oct. 18, 1909. L., 6.5+ cm.  
 o. Reg. No. 2575, S3 street cistern, Oct. 20, 1909. L., 11+ cm.  
 p. Reg. No. 2589, S3 c deep, Oct. 22, 1909. L., 13 cm.  
 q. Reg. No. 2745, Gateway, Sept. 15, 1909. L., 8.7+ cm.  
 r. Reg. No. 2920, N. G. T. 5, June 21, 1910. L., 5.5 cm.  
 s. Reg. No. 3147, S5 a, June 29, 1910. L., 8 cm.  
 t. Reg. No. 4297, S9 cistern 1, Sept. 5, 1910. L., 6.5 cm.  
 u. Reg. No. 1879, L. T. 1 b, Aug. 18, 1909. L., 6 cm.  
 v. Reg. No. 3012, S2 under portico, June 23, 1910. L., 6+ cm.  
 w. Reg. No. 3484, L. T. E., July 13, 1910. L., 8.5 cm.
3. Spikes with end turned over.  
 a. Reg. No. 1473, H. S. 1, June 15, 1909. L., 23 cm.  
 b. Reg. No. 1503, S2 III 31, July 9, 1909. L., 6.2 cm.  
 c. Reg. No. 3485, L. T. E., July 13, 1910. L., 13 cm.
4. Bolt with split end.  
 a. Reg. No. 844, Bas. 2d stratum, June 11, 1909. L., 14+ cm.
5. Iron tack, or ornamental stud, with large head.  
 L., 1.5 to 2.5 cm.  
 a. Reg. No. 2017, L. T. 3 a, Sept. 7, 1909. One. See Pl. 82 k 8.  
 b. Reg. No. 2032, L. T. 3 b, Sept. 8, 1909. Six. See Pl. 82 k 10.  
 c. Reg. No. 3504, L. T. E., July 14, 1910. Three, and fragments of others.

## VI. IRON TOOLS

1. Adze or axe-head, with short vertical blade on one side and long horizontal blade on the other. Thickened at handle hole. See Pl. 82 c.  
 a. Reg. No. 4592, S10 b, Sept. 20, 1910. L., 32 cm.; diam. of handle hole, 2.7 cm.; l. of vertical blade, 10 cm.; l. of cutting edge of same, 7 cm.; l. of horizontal blade, 19.3 cm.; l. of cutting edge of same, 4.5 cm.
2. Large chisels, made by rolling a sheet of iron and welding the edges. Butt hollow; shaft round; edge flat; flaring. See Pl. 82 a 1. Hellenistic or earlier.  
 a. Reg. No. 2507, S3 a W, Greek debris, Oct. 8, 1909. L., 13.2 cm.; w. of edge, 3.8 cm.; butt broken off.  
 b. Reg. No. 4399, S9-913 sub, Sept. 6, 1910. L., 16 cm.; w. of edge, 5 cm.; diam. of butt, 3 cm.  
 c. Reg. No. 4786, S11-11, Oct. 10, 1910. L., 21 cm.; w. of edge, 4 cm.; diam. of butt, 2.8 cm.
3. Chisel similar to 2. The sheet of iron had a projection on each side of the butt. These projections were turned over and welded (?), forming a hollow butt. The blade is flat; the edge, flat and rounded.  
 a. Reg. No. 1694, S2 under portico W (room 63), Sept. 7, 1909. L., 14 cm.; l. of hollow butt, ca. 7 cm.; w. of edge, 3.1 cm. Hellenistic.
4. Chisel with broad edge and shaft with rectangular section.  
 a. Reg. No. 1692, S2 under portico W (room 63), Sept. 7, 1909. L., 12 cm.; w. of edge, 4 cm.; butt, 16 x 8 mm. Hellenistic.
5. Chisels with narrow edge and square shaft.  
 a. Reg. No. 2007, L. T. 1 c S, Sept. 3, 1909. L., 9.3 cm.; w. of edge, 10 mm.; shaft, about 9 mm. square. Hellenistic.
6. Chisel (?) with flat blade and long round shaft.  
 a. Reg. No. 2541, S3 street cistern, Oct. 17, 1909. L., 10.6 cm.; w. of edge, 9 mm.; diam. of shaft, 7 mm. Early Hellenistic.



221. Iron tools. Scale, 1:4.



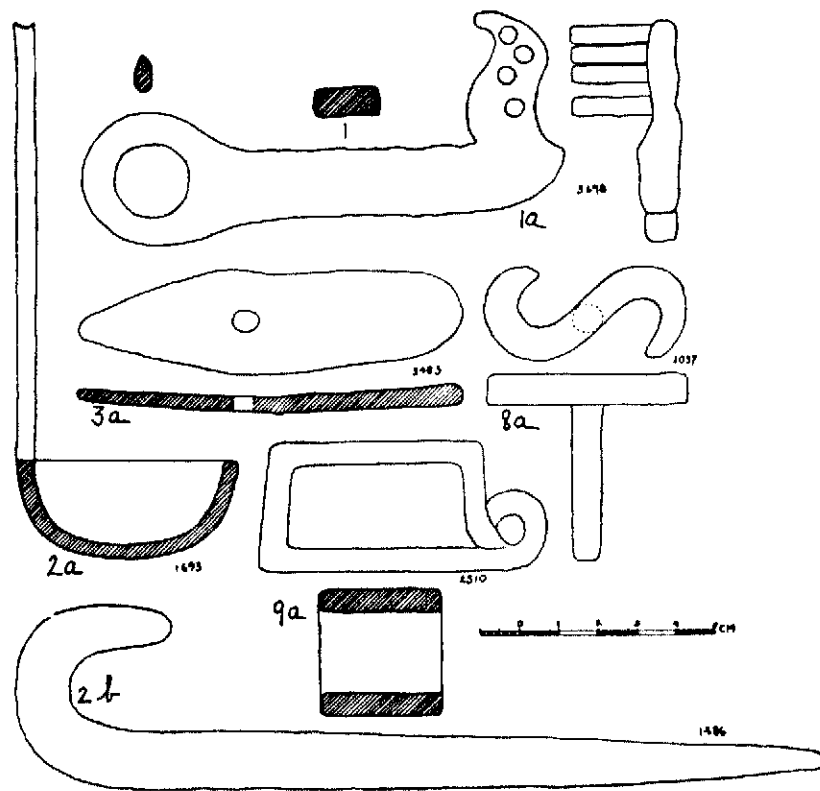
## VII. IRON RINGS

1. Iron ring-band.
  - a. Reg. No. 2539, L. T. 53 cistern, Oct. 13, 1909. Diam., 5.4 cm.; h., 5.4 cm.; thickness of wall, 2 mm.
2. Heavy iron ring.
  - a. Reg. No. 1019, Bas. cist. 1, July 12, 1909. Diam., 10 cm.; section, 17 mm. high x 32 mm. broad.
3. Narrow ring-band.
  - a. Reg. No. 2182, S3 c W, Oct. 5, 1909. Diam., 3 cm.; h., 1 cm.; thickness, 4 mm.
4. Light rings.
  - a. Reg. No. 789, Bas. 2d stratum, June 4, 1909. Diam., 3.6 cm.; section, 2 x 3.5 mm.
  - b. Reg. No. 1839, H. S. 2, July 21, 1909. Diam., 4.1 cm.; diam. of section, 5 mm.
  - c. Reg. No. 2540, L. T. 53 cistern, Oct. 13, 1909. Diam., 4.4 cm.; section, 5 x 7 mm.
  - d. Reg. No. 4528, S8-821, Sept. 16, 1910. Diam., 2.7 cm.; diam. of section, 7 mm.
5. Heavy rings.
  - a. Reg. No. 1396, Bas. cistern 1, July 20, 1909. Diam., 4 cm.; diam. of section, 17 mm.
  - b. Reg. No. 2421, S3-311 black dirt, Oct. 5, 1909. Diam., 2.6 cm.; section, 5 x 8 mm.

For seal-rings, see Chapter XI B III 11-13.

## VIII. MISCELLANEOUS IRON OBJECTS

1. Key. Ring, straight flat shaft, curved crosspiece bearing four upright pegs for lifting pin-tumblers of lock (still in common use in Egypt).
  - a. Reg. No. 3678, S6 c, July 28, 1910. L., 12.2 cm.; l. of crosspiece, 2.5 cm.; h. of pegs, 1 cm.
2. Ladle. Round bowl with handle running straight up from edge of bowl and terminating in a hook.
  - a. Reg. No. 3483, L. T. E., July 13, 1910. L., 9.8 cm.; w., 2.5 cm.
3. Flat iron plate with rivet-hole, apparently ear of bucket handle.
  - a. Reg. No. 3482, L. T. E., July 13, 1910. L., 14 cm.; disc extends beyond bar 8 mm.
4. Handle. Round bar bent into a semicircle, with each end flattened into a disc.
  - a. Reg. No. 2748, S3 under wall between 313-322, Oct. 25, 1909. L., 8.2+ cm. Hellenistic.



222. Miscellaneous objects of iron. Scale, 1:2.

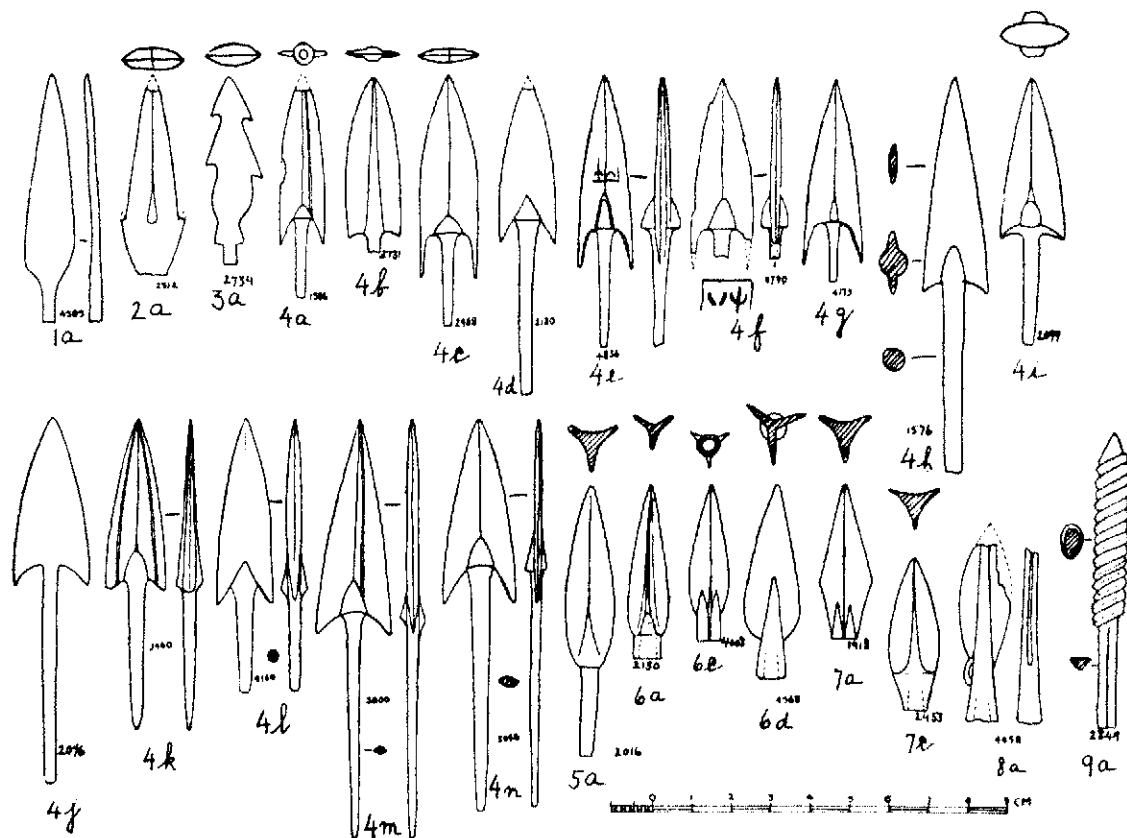
6. Needle with eye.
  - a. Reg. No. 2542, S3 cistern in street, Oct. 17, 1909. L., 7.1+ cm. Early Hellenistic.
  - a. Reg. No. 2037, L. T. 5 c, Sept. 9, 1909. L. of pin, 4.8 cm.; l. of S-piece, 5.1 cm.
7. Long pin (or wire?).
  - a. Reg. No. 2864, S. G. T. 1, June 20, 1910. L., 11 cm.; diam., ca. 2 mm.
8. Iron pin with S-shaped crosspiece (tie for masonry?).
  - a. Reg. No. 2510, S3 street E, Oct. 11, 1909. L., 7.2 cm.; l. of rectangular part, 5.6 cm.; w. of same, 3.2 cm.; h., 3.1 cm.; thickness of band, 7-8 mm. Hellenistic.
9. Part of hinge (?). A rectangular band for bar of door-frame, with a projecting ring (?) for taking part of hinge fastened to door.

## B. BRONZE

## I. BRONZE ARROW-HEADS

The bronze arrow-heads were as a rule found in regular Hellenistic debris with Ptolemaic and Seleucid coins. The pronged blades with long, solid shaft (some inscribed with the word  $\psi$ ) were the most common, and ranged through the whole Hellenistic period. The triangular blades with hollow shaft seem to be of about the same range in date.

1. Long, tapering, flat blade (6.3 cm.), with round shoulder and solid haft.
  - a. Reg. No. 4585, S8-861, Sept. 20, 1910.
2. Short, thick blade with two barbs pointed forward, solid haft.
  - a. Reg. No. 2512, S3-320, Oct. 11, 1909.
4. Tapering blade, with sharp prong on each side of base, incised line on right face of each side from base to tip, long solid haft. Some examples are inscribed  $\psi$ . Length of blade, 5 cm.
  - a. Reg. No. 1586, S2 II 7 above west wall, Aug. 4, 1909.
  - b. Reg. No. 2731, Gateway lowest level, July 7, 1909. See Pl. 82 e 2.



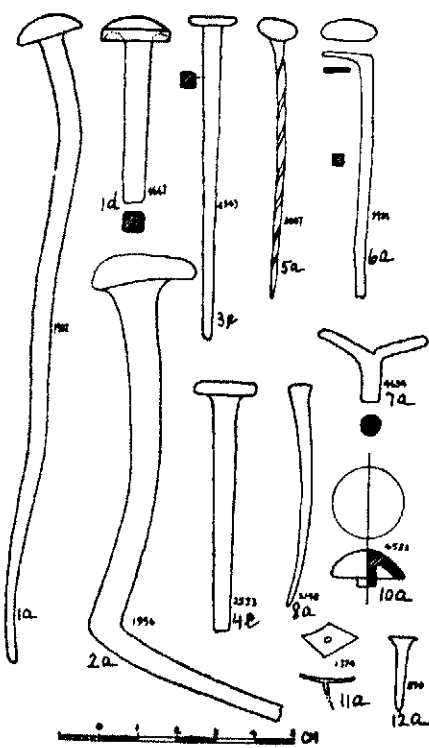
223. Bronze arrow-heads. Scale, 1: 2.

3. Short, thick blade, with two barbs in each side, not symmetrical, solid haft.
  - a. Reg. No. 2734, Gateway roadway, sub Roman, Aug. 19, 1909. See Pl. 82 e 3.
  - c. Reg. No. 2488, S3 a W, Oct. 9, 1909.
  - d. Reg. No. 2120, L. T. 46, Sept. 25, 1909. See Pl. 82 g 3.
  - e. Reg. No. 4836, S11-2 sub, Oct. 11, 1910. Inscribed. See Pl. 82 a 8.

- f. Reg. No. 4790, S9-1001 S in floor above cistern, Oct. 10, 1910. Inscribed. See Pl. 82 a 7.  
 g. Reg. No. 4173, S8-801 S, Sept. 1, 1910.  
 h. Reg. No. 1576, S2 above Greek Fort Wall, July 30, 1909.  
 i. Reg. No. 2099, L. T. 5, upper debris, Sept. 15, 1909.  
 j. Reg. No. 2076, L. T. 5, upper debris, Sept. 2, 1909.  
 k. Reg. No. 3460, L. T. E. a, July 13, 1910.  
 l. Reg. No. 4168, S7 cistern 4, Aug. 31, 1910.  
 m. Reg. No. 3800, S6 e, Aug. 9, 1910.  
 n. Reg. No. 3648, S6 f, July 27, 1910.  
 o. Reg. No. 4538, S8-802 sub, Sept. 17, 1910.
5. Slender blade, with concave, triangular section, solid haft.  
 a. Reg. No. 2016, L. T. 3 a, Sept. 7, 1909. See Pl. 82 k 2.
6. Slender blade, with concave, triangular section, hollow haft.  
 a. Reg. No. 2130, L. T. 63, Oct. 9, 1909. See Pl. 82 g 1.
7. Short blade, with concave, triangular section, hollow haft.  
 a. Reg. No. 1918, L. T. 1 b pit 2, Aug. 24, 1909.  
 b. Reg. No. 2119, L. T. 52 sub, Sept. 25, 1909. See Pl. 82 g 2.  
 c. Reg. No. 2453, S3-313, Oct. 7, 1909. See Pl. 82 i 1.  
 d. Reg. No. 1417, Gateway, Sept. 15, 1909.  
 e. Reg. No. 3544, S5 f, July 18, 1910.
8. Flat blade, hollow shaft.  
 a. Reg. No. 4458, S9-909, Sept. 10, 1910.
9. Long, narrow blade, with solid, triangular shaft. Blade wrapped with iron wire, possibly binding of shaft which was slipped up over blade.  
 a. Reg. No. 2849, N. G. T. 2, June 17, 1910.

## II. BRONZE NAILS

1. Spike. Dome-shaped, round head. Tapering, square shaft.  
 a. Reg. No. 1902, L. T. 1 d, Aug. 21, 1909. L., 16.5 cm.
2. Spike. Flat, round head. Tapering, square shaft.  
 a. Reg. No. 1956, L. T. 1 b cave 3, Aug. 27, 1909. L., 14.8 cm.  
 b. Reg. No. 2391, S3 f, Sept. 23, 1909. L., 8.7+ cm.; w., 8 mm.
3. Large, flat-headed nail, with thin, square shaft.  
 a. Reg. No. 2554, S3 corner cistern, Oct. 17, 1909. L., 2.5+ cm.; w., 4 mm.  
 b. Reg. No. 2571, S3-310 under Roman wall, Oct. 19, 1909. L., 8.6+ cm.; w., 3 mm.  
 c. Reg. No. 4543, S8-817, Sept. 17, 1910. L., 8.2 cm.; w., 3 mm.
4. Flat-headed nail, with square shaft.  
 a. Reg. No. 1732, vault cistern 2, Aug. 24, 1909. L., 4.4 cm.  
 b. Reg. No. 1798, vault cistern 1, Sept. 2, 1909. L., 1.4+ cm.  
 c. Reg. No. 2533, L. T. 53 cistern, Oct. 13, 1909. L., 6.3+ cm.
5. Flat-headed nail, with square shaft, twisted into screw-form.  
 a. Reg. No. 3007, S. G. T. 2, June 23, 1910. L., 7.3 cm.  
 b. Reg. No. 3074, S. G. T. 2, June 25, 1910. L., 6+ cm.
6. Bolt, square shaft, head hammered into oval disc projecting to one side.  
 a. Reg. No. 2985, S. G. T. 4, June 23, 1910. L., 6.3+ cm.; shaft, 4 mm. square.

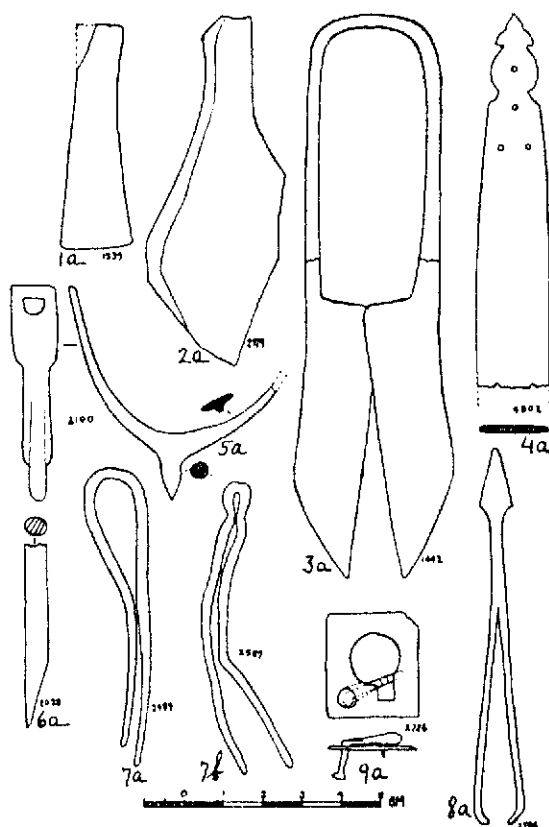


224. Bronze nails. Scale, 1:2.

7. Split-end bolt.
  - a. Reg. No. 4634, S7 blind stairways of vault, Sept. 23, 1910. L., 2.9+ cm.
  - d. Reg. No. 2917, S. G. T. 5, June 21, 1910. L., 3.5+ cm.
8. Square nail, with lump head.
  - a. Reg. No. 2140, S3 c, Sept. 28, 1909. L., 5.6 cm.
9. Round nail, with lump head.
  - a. Reg. No. 3040, S. G. T. 10 n, June 24, 1910. L., 5.8 cm.
  - b. Reg. No. 2973, N. G. T. 4, June 23, 1910. L., 3.6+ cm.
  - c. Reg. No. 2916, S. G. T. 5, June 21, 1910. L., 2.3+ cm.
10. Small stud, with dome-shaped head.
  - a. Reg. No. 4533, S7-773, Sept. 16, 1910. Israelite. Diam., 1.9 mm.
11. Small stud, with lozenge-shaped head.
  - a. Reg. No. 1374, Bas. cist. 1, July 22, 1909. L. of head, 13 mm.
12. Small nail, with small, round head.
  - a. Reg. No. 890, Bas. 2d stratum, June 19, 1909. L. of shaft, 19 mm.

## III. BRONZE IMPLEMENTS

1. Chisel. Flat, rectangular shaft, broad edge.
  - a. Reg. No. 1539, S1 cist. 7, July 5, 1909. L., 5.8 cm. (butt broken off); width of edge, 2 cm.; width of shaft, 1.2 cm. Babylonio-Grecian. See Pl. 66 a 2.
2. Small heavy blade, perhaps a cleaver.
  - a. Reg. No. 2979, S. G. T. 3, June 23, 1910. L., 9 cm.; thickness of back, 1.5 cm. Hellenistic or earlier.
4. Hinge (?). Plate from a hinge with nail-holes.
  - a. Reg. No. 4802, S11-6, Oct. 10, 1910. L., 9.5 cm.; w., 1.8 cm.
5. Spur. Semi-circular, with hole in each end for fastening, and sharp spur behind. Hellenistic.
  - a. Reg. No. 3100, S2 II 68, June 26, 1910. End of one side broken off; total length with spur, 6 cm.; l. of spur, 1.2 cm.



225. Bronze implements. Scale, 1:2.

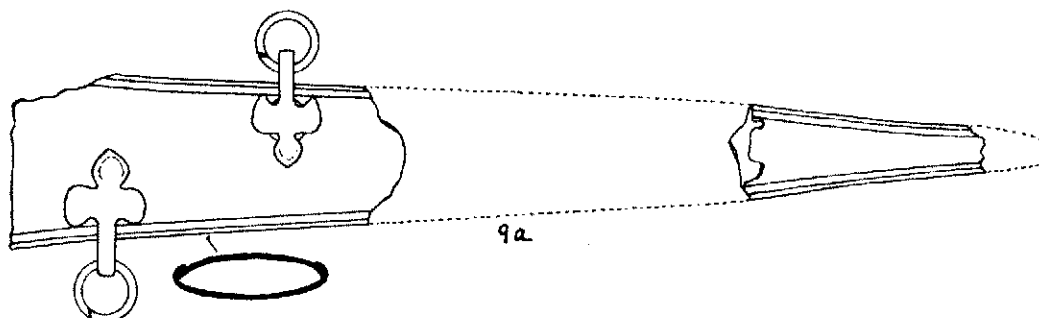
3. Shears, two iron blades joined by a bent band spring of bronze, soldered (? fused) joint.
  - a. Reg. No. 1442, S1 N top dirt, June 3, 1909. L., 14.6 cm.; l. of blade, 7.2 cm.; l. of iron part, 8.3 cm.; l. of bronze part, 6.3 cm. See Pl. 82 b.
6. Stylus. Cylindrical shaft, ground off slanting to form sharp point.
  - a. Reg. No. 2038, L. T. 2 c room 20, Sept. 9, 1909. L., 5.1 cm. (butt end broken off).

## 7. Tweezers. Plain bronze band bent into two arms.

a. Reg. No. 2489, S3 a W, Oct. 9, 1909. L., 7.6 cm. Hellenistic.

b. Reg. No. 2587, S4 d, Oct. 21, 1909. L., 7.5 cm. Roman (?).

## 9. Sword scabbard, with latch and rings for fastening to belt. Two sheets of bronze, edges of one folded over the other sheet, and welded. Attachments welded on. Roman.



226. Bronze scabbard. Scale 1:2.

## 8. Pair of tweezers, ending in a dart-shaped projection where the two legs join. Roman (?).

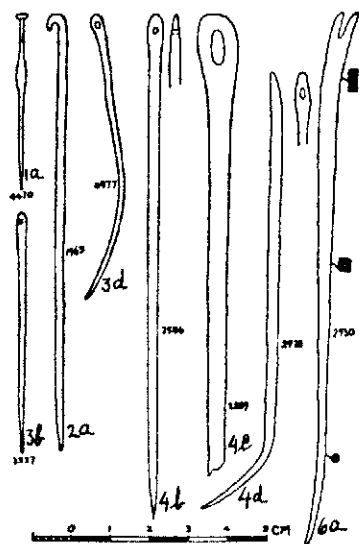
a. Reg. No. 2596, S4 c, Oct. 25, 1909. L., 9.6 cm. See Pl. 82 h 1.

a. Reg. Nos. 2726, 2727, Gateway, in angle between Herodian wall and round tower in Roman debris, July 3, 1909. Parts of the same scabbard.

## IV. BRONZE PINS AND NEEDLES

## 1. Pin with flat head. Swelling above middle of shaft.

a. Reg. No. 4670, S9-941, Sept. 27, 1910. L., 4.6 cm. Hellenistic.

2. Needle (?), with head bent over to form hook (or eyelet?).<sup>1</sup> Hellenistic.

227. Bronze pins and needles. Scale, 1:2.

a. Reg. No. 1965, L. T. 1 c room 1, Aug. 27, 1909. L., 11.2 cm.

b. Reg. No. 2477, S3-314, Oct. 8, 1909. L., 6.6 cm.

c. Reg. No. 2550, S3 street cistern, Oct. 18, 1909. L., 11.2 cm.

## 3. Small needle, with eye.

<sup>1</sup>If a bronze hook of this sort were wedged into one of the small stone whorls, leaving the hook projecting about 10 mm., a

a. Reg. No. 1626, S2 III 42 below floor, Aug. 28, 1909. L., 6 cm. (point broken off). Israelite or Babylonio-Grecian. See Pl. 66 f 6.

b. Reg. No. 2537, S3 street cistern, Oct. 17, 1909. L., 6.2 cm.

c. Reg. No. 3603, S6 i, July 25, 1910. L., 6.9 cm.

d. Reg. No. 4477, S8 a, Sept. 12, 1910. L., 7.8 cm.

## 4. Large needle, with eye.

a. Reg. No. 1602, S2 between west walls of temple, Aug. 16, 1909. L., ca. 19 cm. (in three pieces). Hellenistic.

b. Reg. No. 2586, S4 b, Oct. 21, 1909. L., 13 cm.

c. Reg. No. 2889, S. G. T. 2, June 21, 1910. L., 12+ cm. (head end only); shaft, 5 mm. square. Hellenistic.

d. Reg. No. 2928, S. G. T. 1, June 22, 1910. L., 12 cm. Hellenistic.

e. Reg. No. 3513, S5-361, July 14, 1910. L., 12.4 cm.

f. Reg. No. 4631, S8 d beside Greek Fort Wall, Sept. 23, 1910. L., 23.8 cm.

g. Reg. No. 4733, S9-901, subt. corr., Oct. 1, 1910. L., 18.2 cm.

## 5. Fragments of needles or pins.

a. Reg. No. 1652, S2 III 42 sub, Aug. 31, 1909. L., 3.5 cm. Israelite or later.

b. Reg. No. 2744, S4 f, Oct. 22, 1909. L., 7.3 cm.

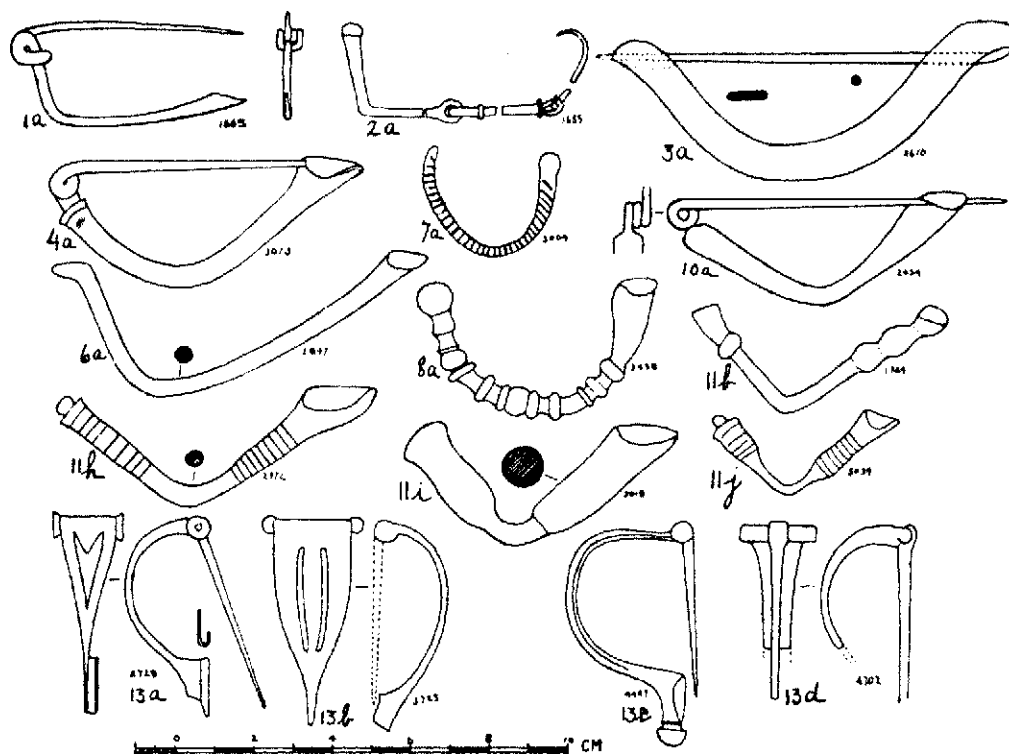
## 6. Long pin, with flat, forked head, lower half of shaft round, upper half 4 mm. square.

a. Reg. No. 2930, S. G. T. 1, June 22, 1910. L., 13.8 cm.

very serviceable spinning whorl would be obtained, equal in weight to modern Arab whorls.

## V. BROOCHES

1. Brooch of single piece of bronze wire. The bow is bent; the catch end flattened and turned over; at the other end the wire makes a four-looped spring and extends into the pin.
  - a. Reg. No. 1665, S2 tunnel of cistern 7, Sept. 1, 1909. L., 6 cm. Israelite or later.
2. Chain-brooch (bronze) of three pieces, held together by ring-joints. Bow, bent, with catch end flattened and turned over. Middle piece ending at
  - b. Reg. No. 2572, S4-310 under Roman wall, Oct. 19, 1909. L., 6.4 cm.
  - c. Reg. No. 2573, S4-310 under Roman wall, Oct. 19, 1909. L., 5.1 cm.
  - d. Reg. No. 2866, S. G. T. 1, June 20, 1910. L., 6.8 cm.; part of spiral preserved.
  - e. Reg. No. 2933, S. G. T. 8, June 22, 1910. L., 7.2 cm.
  - f. Reg. No. 2971, S. G. T. 4, June 22, 1910. L., 6.7 cm.



228. Bronze brooches. Scale, 1:2.

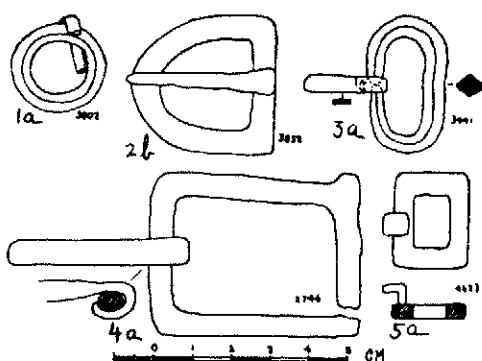
- each end in ring. Pin, with ring in one end and with curved (or hooked) point.
- a. Reg. No. 1635, S2 III 43 sub, deep, Aug. 28, 1909. L. of bow, 3.9 cm. Israelite.
  3. Bronze and iron brooch. Bow, flat, curving iron band, turned over at catch end, and at pin end. The pin, of bronze, is fused to the edge of the turned-over end of the bow (no spiral spring).
    - a. Reg. No. 2610, S4 b surface debris. L., 10 cm. See Pl. 82 h 4.
  4. Bronze brooch, with curving bow and spiral spring. Bow: round bar, curving, flattened and turned over at catch end with a square shoulder at pin end. Spring with pin: of less diameter than bow, issues from centre of end of bow, makes one and a half spiral-turns, and extends into slender pin.
    - a. Reg. No. 3073, S. G. T. 2, June 25, 1910. L., 7.9 cm. Hellenistic.
  5. Brooch, bent (bronze), apparently like No. 4, but with spring and pin broken off. Hellenistic or earlier.
    - a. Reg. No. 2167, S3 c W, Oct. 4, 1909. L., 8 cm.
  6. Brooch-bow (bronze). Round curved bar, flattened and turned over at catch end. The other end has a flat disc-like projection to which the pin was perhaps welded.<sup>1</sup>
    - a. Reg. No. 2897, S. G. T. 3, June 21, 1910. L., 9.6 cm.
  7. Brooch-bow (bronze), curved, with spiral pattern.
    - a. Reg. No. 3004, S. G. T. 2, June 23, 1910. L., 3.5 cm. Hellenistic.
  8. Brooch-bow (bronze), curved, heavily molded. One end flattened and turned over to form catch. Round knob on pin end. Owing to corrosion, it is not possible to see whether there was a spring issuing from end of knob or not.
    - a. Reg. No. 3458, S4-334 sub, July 13, 1910. L., 6.2 cm. Prehellenistic. See Pl. 82 d 2.
  9. Brooch-bow (bronze), straight round bar, bent in the middle (angular bar). One end flattened and turned over to form catch, probably spring and pin on other end, like No. 4, above.
    - a. Reg. No. 2899, S. G. T. 3, June 21, 1910. Hellenistic or earlier.

<sup>1</sup>This may be, however, some sort of detachable vase-handle.

10. Brooch (bronze), angular bar, in middle thick, and molded towards ends. Catch and spiral spring with pin, like No. 4, above.
- a. Reg. No. 2454, S9-913, Oct. 7, 1909. L., 7.5 cm. Hellenistic or earlier. See Pl. 82 i 2.
11. Brooch-bow (bronze), like No. 10. The thick parts of angular bar are usually marked with rings, or molded. Those which are apparently plain may have had rings. All periods.
- a. Reg. No. 1628, S2 III 42 sub, Aug. 28, 1909. L., 7.3 cm. See Pl. 66 f 5.
- b. Reg. No. 1744, vault cistern 2, Aug. 25, 1909. L., 6.4 cm.
- c. Reg. No. 2023, L. T. 3 a, bath room 39, Sept. 8, 1909. L., 5.6 cm. See Pl. 82 k 7.
- d. Reg. No. 2169, S3 b, street, Sept., 1909. L., 6.2 cm.
- e. Reg. No. 2742, L. T. 5 above street, Sept. 27, 1909. L., 4.5 cm. See Pl. 82 e 6.
- f. Reg. No. 2952, S. G. T. 7, June 22, 1910. Fragment.
- g. Reg. No. 2967, S. G. T. 3, June 23, 1910. L., 7 cm.
- h. Reg. No. 2972, S. G. T. 4, June 23, 1910. L., 8 cm.
- i. Reg. No. 3019, S. G. T. 1, June 24, 1910. L., 7 cm.
- j. Reg. No. 3039, N. G. T. 10, June 24, 1910. L., 4.8 cm.
12. Brooch-pins (bronze).
- a. Reg. No. 1627, S2 III 42 sub, Aug. 28, 1909. L., 3.6 cm.
- b. Reg. No. 3686, L. T. E., July 29, 1910. L., 10 cm., with spiral attached.
13. Brooch, with pin attached by pivot hinge. Bow, thin, curving plate, broad at hinge end, running to a point at catch end. Catch end flattened and turned over to form catch. Late Hellenistic and Roman.
- a. Reg. No. 2728, Gateway, in angle between Herodian wall and round tower, Roman debris, July 5, 1909. L., 5.2 cm.; w. of point end, 1.8 cm. See Pl. 82 e 7.
- b. Reg. No. 3725, S4-201 sub, Aug. 3, 1910. L., 5.5 cm.; w. of hinge, 2.4 cm.
- c. Reg. No. 4447, S8 c, Sept. 9, 1910. L., 5.7 cm.; w. of hinge, 2.1 cm.
- d. Reg. No. 4702, S10 a, Sept. 29, 1910. L., 4.7+ cm. (broken); w. of hinge, 2 cm.

## VI. BRONZE AND IRON BUCKLES

1. Circular frame, with flat tongue (bronze). End of tongue bent over to hold bar of frame.



229. Bronze and iron buckles. Scale, 1: 2.

- a. Reg. No. 3802, S6 e E, Aug. 9, 1910. Other objects in same debris (bronze arrow-head, stamped jar handles, black-glazed pottery), of Hellenistic period. Diam., 2.4 cm.
2. Semi-circular frame, with tongue attached to flat side (bronze).
- a. Reg. No. 1795, vault cistern 2, Sept. 1, 1909. Preherodian. L., 1.8 cm.
- b. Reg. No. 3832, S7-357 sub, Aug. 10, 1910. Hellenistic debris. L., 3.6 cm.; w., 3.6 cm.
3. Frame oval, with concave sides (bronze). Tongue attached to one concave side.
- a. Reg. No. 3441, L. T. E., July 12, 1910. All periods represented in debris. Size, 3.5 x 2 cm.
4. Square frame, with flat tongue (iron).
- a. Reg. No. 2746, R. T., July 31, 1909. Debris of all periods. Israelite to Byzantine. Frame, 5.4 x 4.2 cm.
5. Square frame (bronze), with upright hook (latch).
- a. Reg. No. 4633, S7 blind stairway to vault. Preherodian. Size, 2.5 x 2 cm. Elevation of hook, 5 mm.

## VII. BRONZE RINGS, FINGER-RINGS, AND BRACELETS

1. Small ring, closed by welded overlap. Circular section.
- a. Reg. No. 2955, S. G. T. 7, June 22, 1910. Diam., 1.3 cm.
2. Small ring, closed by welded overlap (?), but now broken. Original diam., 2-3 cm.
- a. Reg. No. 1608, S2 cistern 12, Aug. 19, 1909. Present diam., 2 cm.
- b. Reg. No. 1670, S2 cistern 13, Sept. 3, 1909. Present diam., 1.9 cm.
- c. Reg. No. 2743, L. T. 5 upper debris, Sept. 27, 1909. Diam., 1.8 cm. See Pl. 82 e 4.
- d. Reg. No. 4680, S10 c, Sept. 28, 1910. Present diam., 2.3 cm.
- e. Reg. No. 4898, S11 z tower, deep, Oct. 19, 1910. Present diam., 2.1 cm.

3. Small ring, joint not visible. Round section except where otherwise stated.

a. Reg. No. 2513, L. T. 64, Oct. 11, 1909. Diam., 30 mm.; diam. of section, 4 mm.

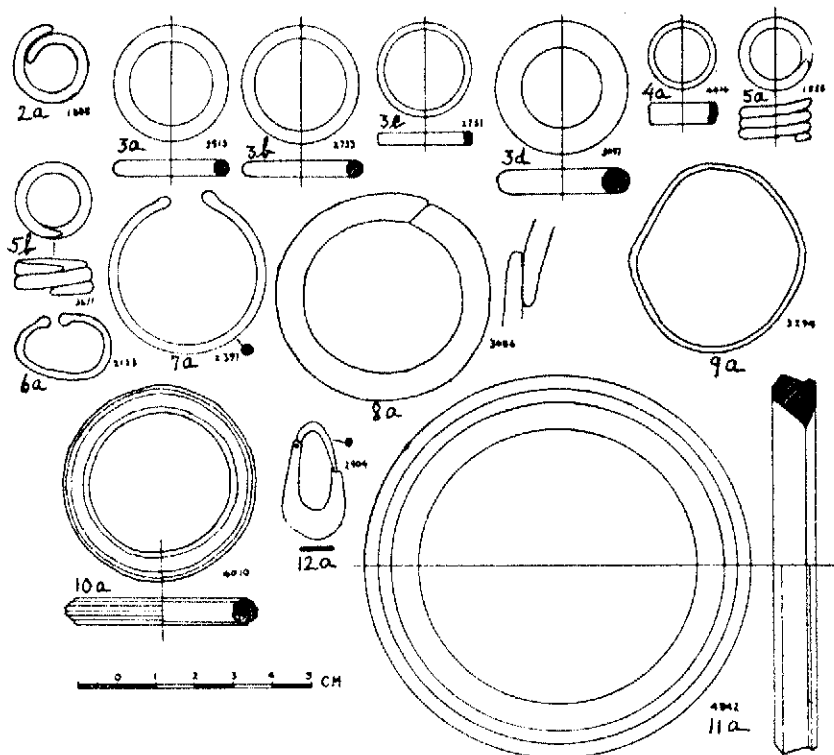
b. Reg. No. 2735, Gateway houses, Aug., 1909. Diam., 31 mm.; diam. of section, 5 mm. See Pl. 82 e 8.

a. Reg. No. 2123, L. T. 5-52 sub, Sept. 25, 1909. See Pl. 82 g 5.

b. Reg. No. 2564a, vault E, hard debris, Aug. 16, 1909.

7. Large open ring, with small knob on each end.

a. Reg. No. 2397, S3 d, Sept. 23, 1909. Diam., 41 mm.; diam. of section, 2.5 mm.



230. Bronze rings and bracelets. Scale, 1:2.

c. Reg. No. 2737, Roadway, July, 1909. Diam., 23 mm.; section, 3 x 1.5 mm. Band ring. See Pl. 82 e 5.

d. Reg. No. 3097, S2 III 68, June 26, 1910. Diam., 34 mm.; diam. of section, 6 mm.

e. Reg. No. 3299, S5 f E, July 4, 1910. Diam., 23 mm.; diam. of section, 3.5 mm.

4. Small band ring, probably a handle-ring. Band concave on inside.

a. Reg. No. 4414, S7 cistern 3, Sept. 8, 1910. Diam., 17 mm.; section, 6 x 1.5 mm.

5. Spiral ring. Finger-rings of this type are found in Egypt.

a. Reg. No. 1832, H. S. 2, July 19, 1909. Diam., 17 mm.; three loops.

b. Reg. No. 3611, S6 e, July 25, 1910. Diam., 20 mm.; two loops.

6. Small open ring, with small knob on each end. Original diameter, about 20 mm.

8. Large closed ring, welded overlap.

a. Reg. No. 3086, S2 III 68, June 26, 1910. Diam., 55 mm.; diam. of section, 8 mm.

9. Large closed band ring, bracelet.

a. Reg. No. 3294, S5 h, July 2, 1910. Diam., 47 mm.; section, 3 x 1 mm.

10. Large closed ring, bracelet, ornamented with parallel lines around the ring outside.

a. Reg. No. 4010, S8 804, Aug. 20, 1910. Diam., 42 mm.; diam. of section, 7 mm.

11. Very large closed ring, with sharp edge inside.

a. Reg. No. 4842, sub. corr. cistern, Oct. 12, 1910. Diam., 10 cm.

12. Bronze earring. Flat, oval pendant, one side prolonged into a bent pin sprung against the end of the other side.

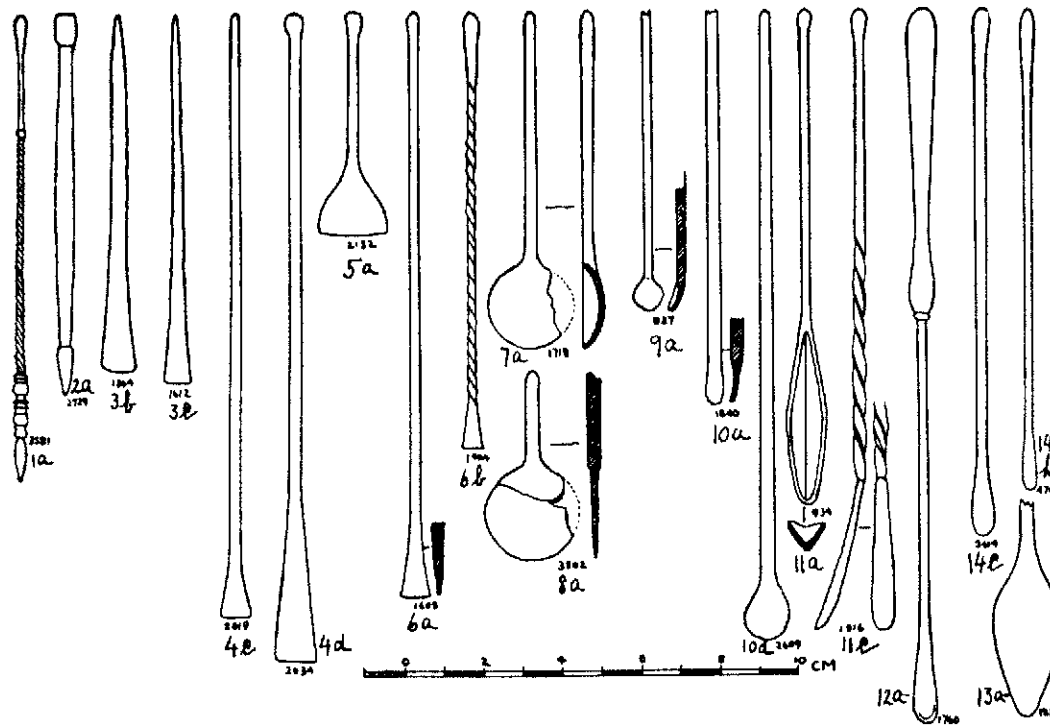
a. Reg. No. 2904, S. G. T. 3, June 21, 1910.

#### VIII. BRONZE STYLI, COSMETIC SPOONS, AND KOHL-STICKS

A large number of bronze sticks were found, which may probably be best divided into point sticks (Nos. 1 to 3, below), knob sticks (Nos. 4 to 6, 10 to 12, and 14), and spoon sticks (Nos. 7, 8, 9, and 13). The point sticks seem to be styli, the knob sticks served as kohl-sticks, and the spoons were for lifting out cosmetics or condiments from a small vase



or bottle. One of the point sticks (3 c), five of the knob sticks (4 a, 6 a, 10 a, d, f) and one spoon (13 a) are Prehellenistic, possibly, with the exception of the spoon, Israelite. The great majority of the examples are Hellenistic, but a few (2 a, 3 a, b, 9 a, 11 a, b) are probably Roman.



231. Bronze styli, cosmetic spoons and sticks. Scale, 1:2.

1. Knob and point stick.

- a. Reg. No. 3581, S4-354 sub, July 21, 1910. L., 12.2 cm.; l. of point, 1.2 cm.; l. of turned part of shaft, 1.7 cm.; l. of twisted shaft, 6.1 cm.; l. of small round part, including knob, 3.2 cm.

2. Spade and spear-point stick.

- a. Reg. No. 2729, Gateway, in angle between Herodian wall and round tower, July 5, 1909. L., 9.8 cm.; l. of point, 1.2 cm.; l. of spade, 0.8 cm. See Pl. 82 e 1.

3. Spade and point stick. Round shaft tapering to a point at one end and to a flat edge at the other.

- a. Reg. No. 976, Bas. 2d stratum, June 26, 1909. L., 6.8 cm.  
b. Reg. No. 1364, Bas. E cut, July 3, 1909. L., 9.2 cm.  
c. Reg. No. 1612, S2 III 41 sub, Aug. 19, 1909. L., 9.5 cm. See Pl. 66 f 2.<sup>1</sup>  
d. Reg. No. 3383, L. T. E., July 8, 1910. L., 8.8 cm.

4. Spade and blunt-end stick. Round shaft, flattened at one end to form a small spade.

- a. Reg. No. 1680, S2 II 311, Sept. 7, 1909. L., 14.3 cm.  
b. Reg. No. 1966, L. T. 1 c, Aug. 27, 1909. L., 9.6 cm.  
c. Reg. No. 2019, L. T. 3 c, between S2 and S3, Sept. 7, 1909. L., 15.5 cm. See Pl. 82 k 11.

- d. Reg. No. 2034, L. T. 3 b, room 28, Sept. 8, 1909. L., 16.6 cm. See Pl. 82 k 12.

- e. Reg. No. 2133, S3 dump, Sept. 15, 1909. L., 10.6 cm.

- f. Reg. No. 2536, S3 corner cistern, Oct. 17, 1909. L., 14.9 cm.

- g. Reg. No. 2551, S3 corner cistern, Oct. 18, 1909. L., 9 cm.

- h. Reg. No. 3011, S2 under portico, June 23, 1909. L., 13.2 cm.

- i. Reg. No. 3146, S5 a, June 29, 1910. L., 15 cm.

- j. Reg. No. 3390, S5 h W, July 8, 1910. L., 6.6 cm.

- k. Reg. No. 4014, S8-801, Aug. 20, 1910. L., 16 cm.

5. Spade and blunt-end stick. Like No. 4, but short, with very wide spade.

- a. Reg. No. 2132, S3 N top debris, Sept. 9, 1909. L., 5.7 cm.; w. of spade, 1.8 cm.

6. Spade and knob stick. Round shaft, swelling to a slight bulb at one end, flattened at the other to form a small spade. Some shafts twisted to form spiral ornament.

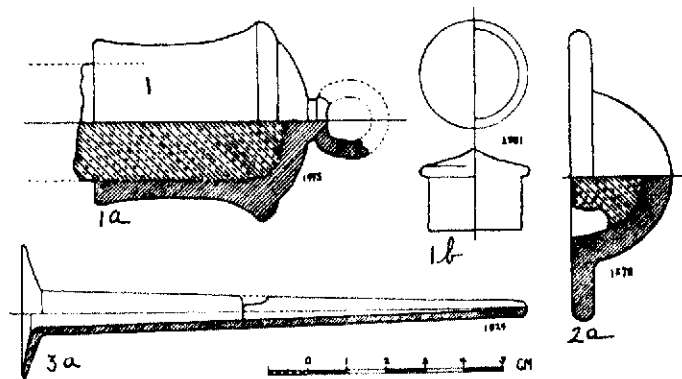
- a. Reg. No. 1605, S2 III 43 sub, Aug. 17, 1909. L., 15 cm.  
b. Reg. No. 1904, L. T. 1 d, Aug. 21, 1909. L., 11.2 cm.; shaft twisted.  
c. Reg. No. 1917, L. T. 1 c, Aug. 23, 1909. L., 4.3+ cm.  
d. Reg. No. 1941, L. T. 1 a, room 15 sub, Aug. 26, 1909. L., 13.8 cm.

<sup>1</sup>Considered by Macalister, Gezer, II, p. 274, to be a stylus.

- e. Reg. No. 3818, S6 d, Aug. 9, 1910. L., 14.8 cm.  
 f. Reg. No. 4778, S11-8, Oct. 7, 1910. L., 12 cm.  
 g. Reg. No. 4799, S11-1 under Roman street, Oct. 10, 1910. L., 16.2 cm.
7. Cosmetic spoon. Straight, round shaft, with a circular hollow bowl.  
 a. Reg. No. 1718, vault cistern 2, Aug. 24, 1909. L., 8.7 cm.; diam. of bowl, 2.2 cm.
8. Cosmetic spoon. Straight, round shaft, with a flat, circular spoon.  
 a. Reg. No. 3502, L. T. E., July 14, 1910. L., 4+ cm. (handle broken off); diam. of spoon, 3.5 cm.
9. Spoon stick. Round shaft (tip missing), one end hammered into a minute, round, hollow bowl, inclined at an angle to the shaft.  
 a. Reg. No. 827, Bas. 2d stratum, June 8, 1909. L., 7.7+ cm.
10. Spoon and blunt-ended stick. Round stick, with one end hammered into a minute, flat, oval spoon. Shaft sometimes twisted, to form spiral ornamentation.  
 a. Reg. No. 1540, S1 cistern 7, July 5, 1909. L., 10.1 cm.  
 b. Reg. No. 1720, vault cistern 2, Aug. 21, 1909. L., 11.4 cm.; twisted shaft.  
 c. Reg. No. 1903, L. T. 1 d, Aug. 21, 1909. L., 10.8 cm.  
 d. Reg. No. 2609, S4 a, in mixed yellow and black debris N of Greek Fort Wall. L., 16.2 cm. See Pl. 82 h 5.  
 e. Reg. No. 2863, S. G. T. 1, June 20, 1910. L., 16 cm.  
 f. Reg. No. 2911, S2 II 7 deep, June 21, 1910. L., 4.5+ cm.  
 g. Reg. No. 3010, S2 under portico, June 23, 1910. L., 13.2 cm.; twisted shaft.  
 h. Reg. No. 3295, S5 h, July 2, 1910. L., 16.5 cm.  
 i. Reg. No. 3587, S6 a, July 22, 1910. L., 12.3 cm.  
 j. Reg. No. 4927, S11-1 N deep, Oct. 22, 1910. L., 17 cm.
11. Spoon and knob stick, with long hollow spoon at one end and slight knob at the other; one with twisted shaft (c, below).  
 a. Reg. No. 934, Bas. 2d stratum, June 24, 1909. L., 12.7 cm.; l. of bowl, 4.6 cm.; w. of bowl, 8 mm.  
 b. Reg. No. 1380, Bas. cistern 1, July 20, 1909. L., 9.1+ cm. (originally ca. 13 cm.), bowl broken off near shaft; w. of bowl, 8 mm.  
 c. Reg. No. 1916, L. T. 1 c, Aug. 23, 1909. L., 15.9 cm.; l. of bowl, 4.2 cm.; w. of bowl, 6 mm.; twisted shaft.  
 d. Reg. No. 4387, Samarra's Land c, Sept. 6, 1910. L., 14.6 cm.; l. of bowl, 3.4 cm.; w. of bowl, 5 mm.
12. Spoon and knob stick. Very long, flat spoon.  
 a. Reg. No. 1760, vault cistern 2, Aug. 26, 1909. L., 18.3 cm.; l. of spoon, 8 cm.
13. Cosmetic spatula. Flat, ovoid spoon on a long, round shaft.  
 a. Reg. No. 1538, S1 cistern 7, July 5, 1909. L., about 18 cm.; l. of spoon, 4.2 cm.; w. of spoon, 1.8 cm. See Pl. 66 a 4.
14. Plain knob sticks.  
 a. Reg. No. 1676, S2 between W walls of temple, Sept. 4, 1909. L., 14.6 cm.  
 b. Reg. No. 1968, L. T. 1 c, Aug. 27, 1909. L., 9.6+ cm.  
 c. Reg. No. 2414, S3 c, Oct. 2, 1909. L., 13.5 cm.  
 d. Reg. No. 2535, S3 street E, Oct. 13, 1909. L., 10.8 cm.  
 e. Reg. No. 2736, R. T., July 29, 1909. L., 12.6 cm.  
 f. Reg. No. 3003, S. G. T. 3, June 23, 1910. L., 10.5 cm.  
 g. Reg. No. 4595, S8 e, Sept. 21, 1910. L., 15 cm.  
 h. Reg. No. 4701, S10 a, Sept. 29, 1910. L., 12.4 cm.

## IX. BRONZE BOSSES

1. Axle (?) boss. Cup-like bronze cap, fitting on head of axle-bar. In example a, the end of the axle-bar, of iron, is still in the cap.  
 b. Reg. No. 2881, S. G. T. 3, June 20, 1910. Diam., 2.4 cm. and 2.8 cm.; l., 2 cm. Hellenistic or earlier.



232. Bronze bosses. Scale, 1:2.

- a. Reg. No. 1975, L. T. 1 c slope, Aug. 28, 1909. Diam. of axle, 3 cm.; of cap, 4 cm.; of broadest part of cap, 5 cm.; l., 6.8 cm. Hellenistic.
2. Heavy boss (from shield or chariot). Circular disc with hollow hemispherical centre. Inside, remains of iron attachment.

- a. Reg. No. 1578, S2 middle, top debris, July 30, 1909. Diam. of disc, 7.5 cm.; of hemisphere, 4.4 cm.; thickness of walls of disc, 6 mm.; of hemisphere, 8 mm.

3. Long hollow spike, round point, with disc for welding to helmet.

- a. Reg. No. 1829, H. S. 1 black debris, July 12, 1909. L., 13 cm.; diam. of disc, 13 mm.; spike, 12 to 5 mm. Hellenistic or earlier.

#### X. BRONZE TRAPPINGS FOR LEATHER, CLOTH, AND WOOD. ALL PERIODS

1. Rectangular plate with pegs (for wood).

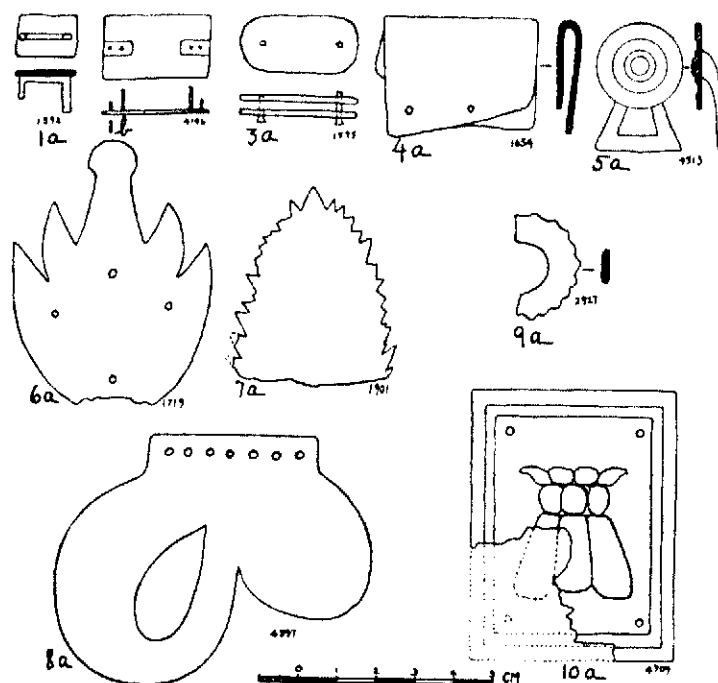
- a. Reg. No. 1592, S2 III 45 sub, Aug. 4, 1909. Size, 16 x 11 mm.; h. of pegs, 9 mm. Two pegs.  
b. Reg. No. 4146, Kaid's Land SW, Aug. 30, 1910. Size, 28 x 17 mm.; h. of pegs, 7 mm. Four pegs, showing traces of wood.

6. Thin, leaf-shaped plate, with holes for fastening, ornamental. Perhaps plate of a handle-ring, or box-latch.

- a. Reg. No. 1719, vault cist. 2, Aug. 21, 1909. L., 3.5 cm.; w., 2.7 cm.

2. Round-headed tack (for wood). See B II Nails, Nos. 10-12, above.

7. Thin, leaf-shaped plate, with serrated edge. Broken off at base. Probably had the same purpose as No. 6.



233. Bronze trappings. Scale, 1:2.

3. Two oval plates, held together with rivets (for leather).

- a. Reg. No. 1595, S2 III 45 sub, Aug. 4, 1909. L., 30 mm.; w., 14 mm.; l. of rivet, 8 mm.

4. Folded, rectangular plate, with thread-holes (for leather).

- a. Reg. No. 1654, S2 III 42 sub, Aug. 31, 1909. Size, 38 x 30 mm.

5. Molded disc, with triangle attached by apex to centre of back of disc. A triangle of same type, of silver (Reg. No. 2750), was found with Roman scabbard.

- a. Reg. No. 4513, S7-773, Sept. 15, 1910. Israelite. Diam. of disc, 23 mm.; l. of triangle, 23 mm.; w. of base of triangle, 22 mm.

- a. Reg. No. 1901, L. T. 1 d, Aug. 21, 1909.

8. Thin, ornamental plate, with row of small holes along straight edge.

- a. Reg. No. 4597, S8 e, Sept. 21, 1910. L., 7.8 cm. See Pl. 82 m 4.

9. Flat ring, with serrated edge. Half of it missing.

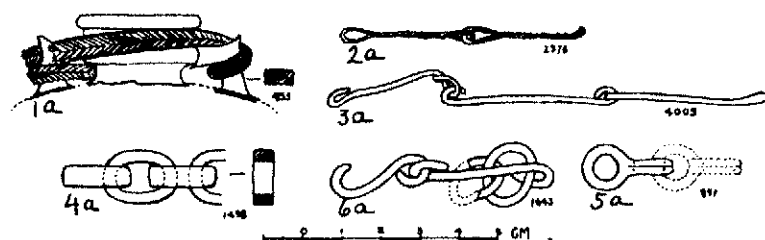
- a. Reg. No. 2927, S2 II 7 deep, June 22, 1910.

10. Rectangular plate, with flower in relief. Hole in each corner (for wood?).

- a. Reg. No. 4709, S10 N end of Greek street, Sept. 29, 1910. L., 6.9 cm.; w., 5.3 cm. See Pl. 82 m 3 (back).

## XI. BRONZE CHAINS

1. Heavily woven chain, attached to handles of a two-handled bronze bottle. See Pl. 82 f 3.
  - a. Reg. No. 4153, S7 cistern 5, Aug. 30, 1910. Hellenistic.
4. Single oval-link chain. Each link is a closed band oval.
  - a. Reg. No. 1498, S1 cistern 8, July 1, 1909. Eleven links, each 1.8 x 1.3 cm. Hellenistic.

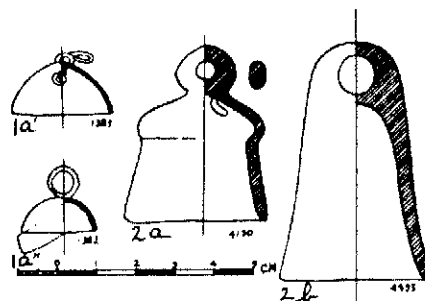


234. Bronze chains. Scale, 1: 2.

2. Long-link chain. The links are made of wire rings twisted into a shaft, with a loop at each end.
  - a. Reg. No. 2576, S3 street cistern, Oct. 20, 1909. Two links, each 3 cm. long. Hellenistic.
3. Long-link chain. Each link is a straight wire turned over at each end to form a loop.
  - a. Reg. No. 4005, S8-801, Aug. 20, 1910. Three links, each ca. 4.5 cm. Hellenistic.
5. Double ring-link. Link of two rings set at right angles.
  - a. Reg. No. 891, Bas. 2d stratum, June 19, 1909. L., 2.3 mm.
  - b. Reg. No. 975, Bas. 2d stratum, June 28, 1909. Six links, with an attachment at each end. Each link about 1.6 cm. long. Roman.
6. Combination chain, or perhaps a brooch.
  - a. Reg. No. 1643, S2 III 43 sub, Aug. 30, 1909. Hellenistic or earlier.

## XII. BRONZE BELLS

1. Small hemispherical bell, with ring above and clapper inside.
  - a. Reg. Nos. 1382 and 1383, Bas. cistern 1, July 20, 1909. Diam., 21 and 26 mm. Roman.
2. Bells, with ring attachment above and fragment of clapper-hook inside. Different forms.
  - a. Reg. No. 4150, S10 e, Aug. 30, 1910. H., 4.5 cm.; diam., 3.6 cm. See Pl. 82 f 2.
  - b. Reg. No. 4493, Kaid's Land, Sept. 13, 1910. H., 6 cm.; diam., 3.9 cm. See Pl. 82 m 1.



235. Bronze bells. Scale, 1: 2.

## XIII. BRONZE WEIGHTS. HELLENISTIC

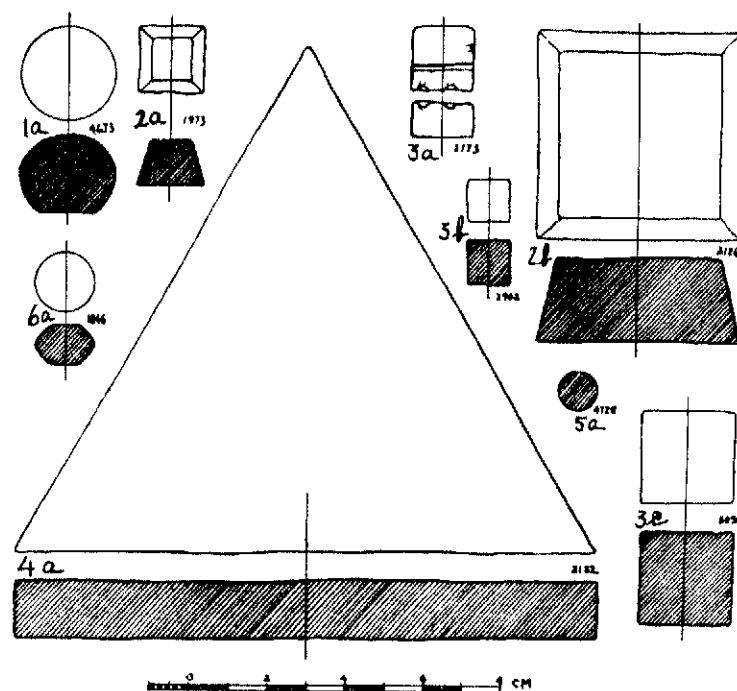
For other weights see Chapter VIII

1. Spheroidal, with flattened side.
  - a. Reg. No. 4673, S8-883, Sept. 27, 1910. Diam., 24 mm.
  - b. Reg. No. 1859, L. T. 1 cistern 1, Aug. 16, 1909. H., 25 mm.; diam., 27 mm.
2. Truncated, pyramidal.
  - a. Reg. No. 1973, L. T. 1 b cave 3, Aug. 28, 1909. H., 11 mm.; 16 mm. square.
3. Rectangular.
  - a. Reg. No. 2173, S3 b Greek debris, Oct. 5, 1909. Dimensions, 16 x 16 x 9 mm. Top marked with incised line; three notches in upper edge.
  - b. Reg. No. 2902, S. G. T. 4, June 21, 1910. Cubical, 11 mm.
- b. Reg. No. 3126, S. G. T. 4, June, 1910. H., 26 mm.; 48 x 35 mm.

c. Reg. No. 3056, S. G. T. 4, June 25, 1910. Cubical, 22 mm.

5. Ball.

a. Reg. No. 4728, S10 b, Sept. 30, 1910. Diam., 10 mm.



236. Bronze weights. Scale, 1:2.

4. Triangular plate.

a. Reg. No. 3132, S. G. T. 3, June 28, 1910. L. of each side, 15 cm.; thickness, 1.2 cm.

6. Double cone-form with both ends truncated.

a. Reg. No. 1846, H. S. 1 black debris, July 22, 1909. Diam., 14 mm. (half only).

#### XIV. BRONZE VESSELS AND HANDLES. HELLENISTIC

1. Bronze bucket, with iron handle. Rim of bucket turned over outward and ends of handle caught under rim. Iron handle rusted away.

a. Reg. No. 4296, S9 cistern, Sept. 5, 1910. Diam., 20 cm.; h., 20 cm.

2. Fragment of rim of small pail or jar, with ring for handle riveted on with single rivet.

a. Reg. No. 1518, H. S. 1, June 22, 1909. L., 3.7 cm.; diam. of hook, 8 mm.

3. Handle-hook from bronze vessel. A single piece bent into a loop, with two flattened ends turned out horizontally. Rivet hole in each end.

a. Reg. No. 1645, S2 Greek debris, N. of Greek Fort Wall, Aug. 30, 1909.

4. Handle-hook from bronze vessel. Single piece, broad where attached, with narrow hook. Rivet hole in broad part. Narrow part bent down outside to form hook.

a. Reg. No. 4486, Samarra's Land, Sept. 13, 1910. L., 5.6 cm.

5. Handle-ring from rim of large bronze vessel. Band 8 cm. long and 2 cm. wide, with triangular section, 3-9 mm. thick, fastened to vessel by two rivets. A triangular plate ending above in a ring welded to middle of band.

a. Reg. No. 3324, S5 h, July 4, 1910.

6. Handle-ring from rim of large bronze vessel. Flat band 6.5 cm. long and 3.2 cm. wide, fastened with two rivets, ring on upper edge. Diam. of ring, 2.5 cm.

a. Reg. No. 4855, subt. corr. cistern, Oct. 14, 1910.

7. Handle-ring from rim of large vessel. Curving, leaf-shaped plate, with a ring at the upper (butt) end. Two rivet holes.

a. Reg. No. 4404, S9 cistern 1, Sept. 6, 1910. L., 10 cm.; w., 5.4 cm. See Pl. 82 f 1.

8. Bronze handle, with one eyelet or ring still attached. The ring is part of a flat band, which was welded or riveted to a small vase. The handle is a curved bar ending in a hook at each end. Bronze vessels of a corresponding size and with the same type of handle are common in Egypt from the XVIIIth dynasty downwards.

a. Reg. No. 4693, S10 d, Sept. 27, 1910. Width of handle, 3.9 cm.

9. Handles of same type as No. 8.

a. Reg. No. 2121, L. T. 52 sub, Sept. 25, 1909. W., 4 cm. See Pl. 82 g 7.

b. Reg. No. 2161, S3 b SE, Oct. 4, 1909. W., 8.5 cm.

c. Reg. No. 2514, S3-323, Oct. 12, 1909. W., 5.3 cm.

d. Reg. No. 2597, S4 f, Oct. 22, 1909. W., 5.2 cm. See Pl. 82 h 3.

e. Reg. No. 3351, S5 f, July 6, 1910. W., 6.5 cm.

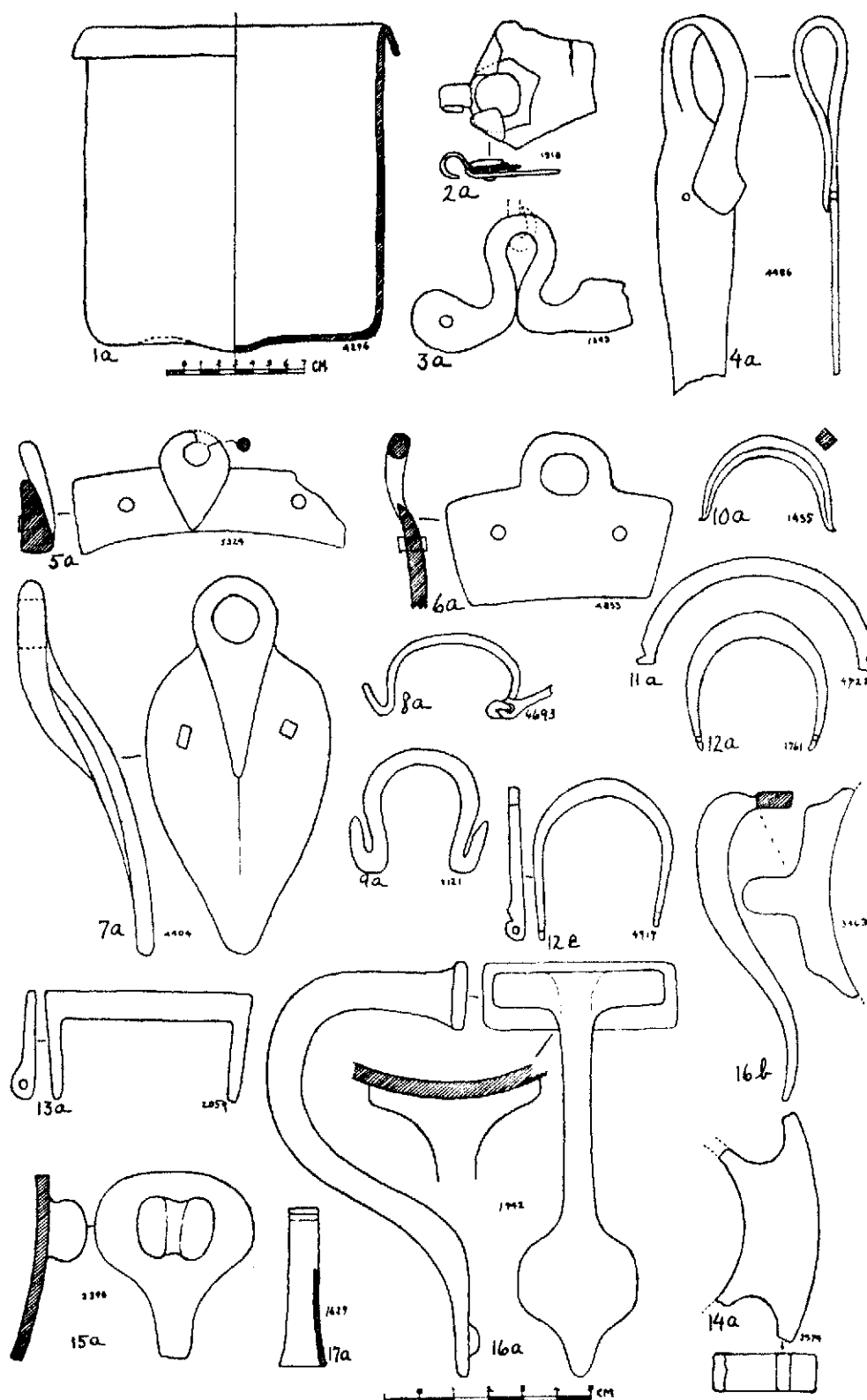
f. Reg. No. 4921, S11-13 cistern, Oct. 21, 1910. W., 2.3 cm.

10. Handle of same type as No. 8, with square section. The hooks have been twisted off.

a. Reg. No. 4722, S10 b, Sept. 29, 1910. W., 6.8 cm.; w. of band, 5 mm.; thickness of band, 2 mm.

12. Handle of small vase. Curved bar, with hole in each end.

a. Reg. No. 1761, vault cistern 2, Aug. 26, 1909. W., 3.3 cm.



237. Bronze vessels and handles. Scale, 1:2, except 1 a, which is 1:4.

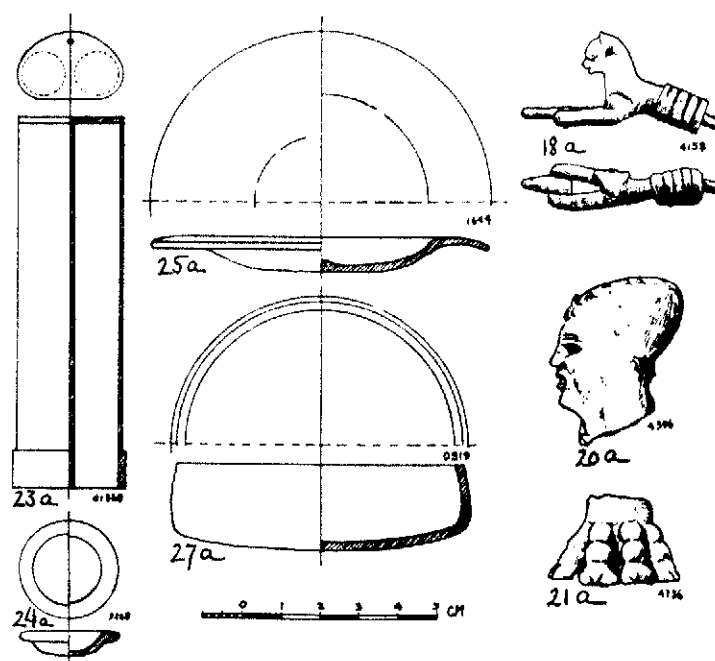
a. Reg. No. 1435, Bas. 13, Aug. 10, 1909. W., 3.8 cm.

b. Reg. No. 2439, S3 a, Oct. 6, 1909. W., 3.8 cm. See Pl. 82 i 3.

11. Handle of small vase. A curved flat bar, notched at each end, to be sprung inside rim of vase.

c. Reg. No. 4917, subt. corr. dump, Oct. 20, 1910. W., 4 cm.

13. Handle of small vase. Bar forms three sides of a rectangle. Hole in each end.  
a. Reg. No. 2059, L. T. 5, street floor, Sept. 13, 1909.
14. Ledge handle. Heavy plate, 11 mm. thick, fastened edgewise to some vessel (?). Curvature of inside edge fits a circle of 6 cm. Possibly handle of an oval vase; otherwise not a vase handle.  
a. Reg. No. 2574, S4-310 under Roman wall, Oct. 19, 1909. L., 6.7 cm.
19. Head with a cap, from a handle (?).  
a. Reg. No. 2476, S3-314 E, Oct. 8, 1909. L., 2.6 cm.
20. Head (flat), from a handle (Egyptian?).  
a. Reg. No. 4396, S9-906 sub, Sept. 6, 1910. H., 5.2 cm. See Pl. 82 m 2.
21. Leg of small bowl or basin, in form of a lion's paw.  
a. Reg. No. 4736, S2 III 70 street sub, Oct. 1, 1910. H., 4 cm. See Pl. 82 m 5.



238. Bronze vessels and ornamental parts of vessels. Scale, 1: 2.

15. Heart-shaped knob-handle from side of vessel.  
a. Reg. No. 2396, S3 d, Sept. 23, 1909. L., 5.4 cm.; w., 5 cm.  
b. Reg. No. 2184, S3 c W, Oct. 5, 1909. L., 5.3 cm.; w., 4.3 cm.
16. Loop-handle of large vase. Lower end attached to body of vase, upper end worked to a curved crosspiece fitting rim of vessel. Soldered on.  
a. Reg. No. 1942, L. T. 1 b 12, Aug. 26, 1909. H., 12 cm.; w., 5.9 cm.  
b. Reg. No. 3463, S5 e W, July 13, 1910. H., 9 cm.; w., 1.5 cm. See Pl. 82 d 1.  
c. Reg. No. 3514, S5-361, July 14, 1910. Lower part only. L., 6.3 cm.
17. Straight round bar, projecting from side or rim of vessel. Flaring at end.  
a. Reg. No. 1629, S2 III 42 sub, Aug. 28, 1909. L., 4.5 cm.; diam. of middle, 9 mm. See Pl. 66 f 8.
18. Ornamental handle, fore-quarters of a cat-like animal. See Pl. 82 l. For this and the following see Fig. 238.  
a. Reg. No. 4158, S10 e, Aug. 30, 1910.
22. Neck of a two-handled bronze bottle.  
a. Reg. No. 4153, S7 cistern 5, Aug. 30, 1910. With chain attached. See Fig. 234, No. 1 a, above, and Pl. 82 f 3.
23. Kohl-tube. A number of badly decayed fragments were found from which could be reconstructed the double kohl-tube shown in Fig. 238. The lid turned on the pivot sideways across the top.  
a. Dis. No. 1368, L. T. 1 c slope, Sept. 1, 1909.
24. Minute saucer, filled with red color.  
a. Reg. No. 3268, S5 a, July 2, 1910. Diam., 2.6 cm.
25. Shallow saucer. Cf. alabaster saucer, Fig. 206, No. 7 c.  
a. Reg. No. 1644, S2 III 43 sub, Aug. 30, 1909.
26. Saucer, with fluted body and two horizontal rim-handles.  
a. Reg. No. 421, Trench I on slope of summit, July 30, 1908. Diam., 5.1 cm. See p. 26, A c 3.
27. Small bowl. Decayed fragments only, but the form shown in Fig. 238 was clear.  
a. Dis. No. 519, S7-755 N, Sept. 14, 1910. Diam., 7.6 cm.

XV. VARIOUS BRONZE OBJECTS OF OBSCURE PURPOSE<sup>1</sup>

1. Bronze strip, with a hook at one end.

a. Reg. No. 4604, S8-816, Sept. 21, 1910. L., ca. 10 cm.; w., 6 mm.; end opposite the hook end bent over, perhaps accidentally. The hook is also a flat band.

2. Bronze bar, 5.2 cm. long, wrapped spirally with wire. Each end bent over to form a small ring carrying a separate movable ring about 10 mm. in diameter.

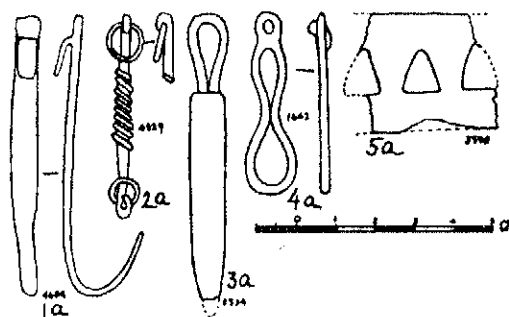
a. Reg. No. 4529, S8-821, Sept. 16, 1910.

3. Bronze wire loop, with the ends enclosed in a flat sheath. L., 7.2 cm.; l. of sheath, 5.5 cm.; l. of loop, 1.7 cm.

a. Reg. No. 2534, L. T. 53 cistern, Oct. 13, 1909.

4. Closed bronze wire, constricted into double loop form, with an eyelet at one end. L., 4.5 cm.

a. Reg. No. 1642, S2 III 43 sub, Aug. 30, 1909.



239. Miscellaneous objects of bronze.  
Scale, 1:2.

5. Band (3 cm. broad), with row of triangular holes (11 mm. high and 10 mm. wide).

a. Reg. No. 3598, S6 b, July 23, 1910.

## C. GOLD

1. Small gold cap, pierced in the centre. The end cap of a handle or of a cylinder seal.

a. Reg. No. 1817, H. S. 6, in the debris inside a Severan vat, June 29, 1909. Diam., 15 mm.

2. Small gold sheath. Cap from a rod.

a. Reg. No. 1896, L. T. 2 d, Aug. 20, 1909. L., 8 mm.; diam., 5 mm.

3. Small oval plate, thin, crumpled.

a. Reg. No. 2751, Gateway, July 6, 1909.

4. Earring. Two pieces of gold wire linked together with small eyelet. The pendant bore a small pierced pearl.

a. Reg. No. 1950, L. T. cistern 1, Aug. 14, 1909. See Pl. 57 a 9.

5. Heart-shaped pendant, set with red glass (?). Eyelet on top.

a. Reg. No. 4869, S7-721, Aug. 22, 1910. See Pl. 57 d 5.

6. Seven pieces of heavy gold plate (ready for melting?).

a. Reg. No. 4808, S11-2 sub, Oct. 10, 1910. Found in a small pot, Fig. 181, No. 17 g. See Pl. 57 e.

7. Gold scarab-ring of Egyptian origin.

a. Reg. No. 4635, S8 west of Greek Fort Wall in disturbed yellow debris beside Israelite wall, Sept. 23, 1910. See Pl. 56 d.

## D. SILVER

1. Small finger-ring.

a. Reg. No. 1815, H. S. 1 top debris, June 21, 1909. Diam. 22 mm.; section, 3 mm. square.

2. Triangular piece from a harness ornament or something similar. See Bronze B X, No. 5, above.

a. Reg. No. 2750, Gateway in angle with Roman scabbard, July 3, 1909. Size, 2 x 1.7 cm.

3. Silver (?) band.

a. Reg. No. 4856, subt. corr. cistern (sifter), Oct. 14, 1910. Band, 9 cm. long; section, 5 x 1.5 mm.

4. Silvered bronze bracelet.

a. Reg. No. 4055, S10 a, Aug. 22, 1910. Diam., 6 cm. (broken open); section, 7 x 1.5 mm.

5. Fragment of a silver ornament.

a. Reg. No. 964, Bas. 2d stratum, June 26, 1909.

6. Small silver ring, with round bezel inlaid with rosette in gold.

a. Reg. No. 2809, S3 b, Sept. 8, 1909. See Pl. 57 a 10.

7. Silver ring, with oval bezel (a separate piece soldered on).

a. Reg. No. 2998, S. G. T. 3, June 23, 1910. See Pl. 57 d 11.

<sup>1</sup>In addition to these objects, a bronze band must be mentioned which was used to repair the limestone plate Reg. No. 1933, found in L. T. 1 c, Aug. 25, 1909.



## E. LEAD

Lead was used in rivets for fastening sculpture (see Chapter XII A II, No. 1), in wire for mending pottery (see Pl. 74 h), and in magical figures (see Chapter XII A II, No. 10). It was also used in weights, water-pipes, and sling-missiles (see below).

## 1. Lead bars and bands.

- a. Reg. No. 1555, S2 S, July 15, 1909. Twisted rectangular bar, 5.3 cm. long; section, 2.5 mm. square.
- b. Reg. No. 1713a, vault cistern 2, Aug. 20, 1909. Twisted band, 0.5 cm. long, with a section 10 x 2.5 mm.
- c. Reg. No. 2588, S3 c, Oct. 22, 1909. Bent rectangular bar, 18 cm. long, with a section 3.5 mm. square.
- d. Reg. No. 1998, L. T. 1 c slope, Sept. 2, 1909. Bent bar, tapering towards ends; 17 cm. long, with a triangular middle section, 8 x 4 mm.
- e. Reg. No. 3034, S. G. T. 1, June 24, 1910. Lead bar, with one end turned up at right angles. L., 7 cm.; l. of bent end, 3 cm.; diam. of section, 5 mm.

## 2. Lead rivet. Nail-shaped, with round head and protuberances on shaft.

- a. Reg. No. 1894, L. T. 3 d, Aug. 20, 1909. Bent into a circle about 5.5 cm. across; diameter of section, 5.5 mm.

## 3. Lead pipe.

- a. Reg. No. 1889, L. T. 1 a cave I, Aug. 20, 1909. Crushed flat, 4.4 cm. long, 22 x 9 mm. in section.
- b. Reg. No. 958, Bas. 2d stratum, June 25, 1909. Crushed flat, 2.9 cm. long, 22 x 9 mm. in section.
- c. Reg. No. 1746, vault cistern 2, Aug. 25, 1909. L., 6.3 cm.; diam., 1.4 cm.
- d. Reg. No. 3128, N. G. T. 3, June 28, 1910. L., 60 cm.; diam., 11.5 cm.

## 4. Lead sling-missile (glans).

- a. Reg. No. 1860, L. T. 1 a, Aug. 16, 1909. L., 4.5 cm.

- b. Reg. No. 1684, S2 cistern 13, Sept. 7, 1909. Eight pieces, varying in length from 3.6 to 4.6 cm.

- c. Reg. No. 3373, S5 on Greek Fort Wall, July 7, 1910. L., 3.3 cm.

- d. Reg. No. 3476, L. T. E., July 13, 1910. One side shows a trident in relief, the other a thunderbolt. L., 3.4 cm. See Pl. 83 c 2.

## 5. Lead disc.

- a. Reg. No. 1743, vault cistern 2, Aug. 25, 1909. Diam. 4 cm.; pierced near centre.
- b. Reg. No. 2538, L. T. 60 sub, Oct. 13, 1909. Diam., 8 cm., thin, with circular depression about 22 mm. across.

## 6. Lead disc, with bronze eyelet on edge. Slight rim around edge on both sides.

- a. Reg. No. 4415, S7 cistern 3, Sept. 8, 1910. Diam., 11.5 cm.; 3.5 mm. thick.

## 7. Lead disc with inscription.

- a. Reg. No. 3638. See p. 250, No. 6; Pl. 57 g.

## 8. Lead weight (or stand).

- a. Reg. No. 4530, S8-821 S, Sept. 16, 1910. Size, 3.6 x 3.4 cm.; 1.2 cm. thick.

## 9. Lead bowl.

- a. Reg. No. 4773, S11-3, Oct. 7, 1910. Diam., 8.2 cm.; h., 3.5 cm.

## 10. Lead strip, ornamental.

- a. Reg. No. 3714, S4-356 sub, Aug. 3, 1910. Hellenistic.

## CHAPTER X

### OBJECTS OF BONE AND IVORY

#### A. EARLY IVORY OBJECTS

1. Handle of ivory, carved in the form of a winged Uraeus wearing the double Egyptian crown. See Pl. 56 f.
 

Abab courtyard, Aug. 12, 1910. L., 7.3 cm.; diam. of shaft, 1.6 cm.
- a. Reg. No. 4125, S7-742 sub on the floor of the Ahab courtyard, with the fragments of the alabaster jar inscribed with the name of Osorkon II, Aug., 1910. Handle of a mirror (?).
2. Dagger-handle of ivory, with the end carved in the form of a snarling lion's head. Slot in the other end to take haft of the blade, and two rivet holes, one with fragment of bronze rivet, to fasten haft. See Pl. 56 c.
  - a. Reg. No. 3862, S4-414 on top of projection of foundation wall, in surface dirt of magazine in
3. Various fragments of ivory and bone found in mixed dirty yellow debris near rock in S2 III 43 and 47 sub.
  - a. Reg. No. 1655, S2-43 sub, Aug. 31, 1909. An object shaped like an Egyptian breast pendant; carved in the form of a Bes-head, with an ornamental collar. See Pl. 66 h 1.
  - b. Reg. Nos. 1656-1658 (found with a) and 1613 (found in the adjacent room S2-47), Aug. 20, 1909. No. 1656=Pl. 66 h 2, 1657=Do. 3, 1658=Do. 4-7, 9-13. No. 1613 (3 pieces)=Pl. 66 f 3.
  - c. Reg. No. 1620, flat piece of carved bone found in S2 III 36 sub, Aug. 21, 1909. See Pl. 66 f 4.

#### B. DRESSED BONES

1. Dressed bones and horns. See Pl. 66 b, c, d. In S1 cistern 7 we found a large number of dressed bones and horns. A number of the ends of sheep's or goats' bones have been cut off square. Some have been shaved also, and one (Pl. 66 c, No. 4) ornamented with incised lines. Many other bones had been merely broken with a knife or cleaver. They include leg bones, vertebrae, scapulae, pelvic bones, and jaw bones of sheep, goat, and calf or bullock. All are of edible domestic animals, and the bones were probably so dressed in the preparation of food.
  - a. Reg. Nos. 1542 to 1545, S1 cistern 7, July 1-6, 1909.
  - b. Reg. No. 3332, one other similar dressed bone; end of a sheep's leg, with the top dressed to a ridge and the interior hollowed into two compartments; found in S5 a, July 5, 1910.
2. Boars' tusks were found in the Hellenistic debris in all parts of the site. These were usually carefully smoothed or polished and ground on the concave side. One (a, below) had a hole pierced through the thick end.
  - a. Reg. No. 3746, S4 cistern 1, Aug. 5, 1910. See Pl. 83 g 1.
  - b. Reg. No. 3747, S4 cistern 1, Aug. 5, 1910. See Pl. 83 g 5.
  - c. Reg. No. 886, Bas. 2d stratum, June 16, 1909.
  - d. Reg. No. 898, Bas. 2d stratum, June 21, 1909.
  - e. Reg. No. 1002, Bas. 2d stratum, July 31, 1909.
  - f. Dis. No. 1407, L. T. 1 b cave 3, Aug. 27, 1909.
  - g. Dis. No. 1372, L. T. 1 c, Sept. 1, 1909.
  - h. Dis. No. 1378, L. T. 1 d, Aug. 21, 1909.

#### C. SPOONS

1. Small cosmetic-spoon, with round bowl.
  - a. Reg. No. 3705, S4-356 sub, Aug. 1, 1910. See Pl. 83 g 3.
2. Small cosmetic-spoon, with oval bowl. Flat top decorated with geometrical pattern of circles.
  - a. Reg. No. 1878, L. T. b, Aug. 18, 1909. L., 9 cm.
3. Large spoons, with pointed ovoid bowl, only slightly dished. The handles are all broken off.
  - a. Reg. No. 1882, L. T. 1 c, Aug. 18, 1909. L. of bowl, 5 cm.
  - b. Reg. No. 3245, S5 c, July 1, 1910. L. of bowl, 5 cm. See Pl. 83 b 4.
  - c. Reg. No. 3266, S5 d, July 2, 1910. Oval bowl, 6 cm. long.

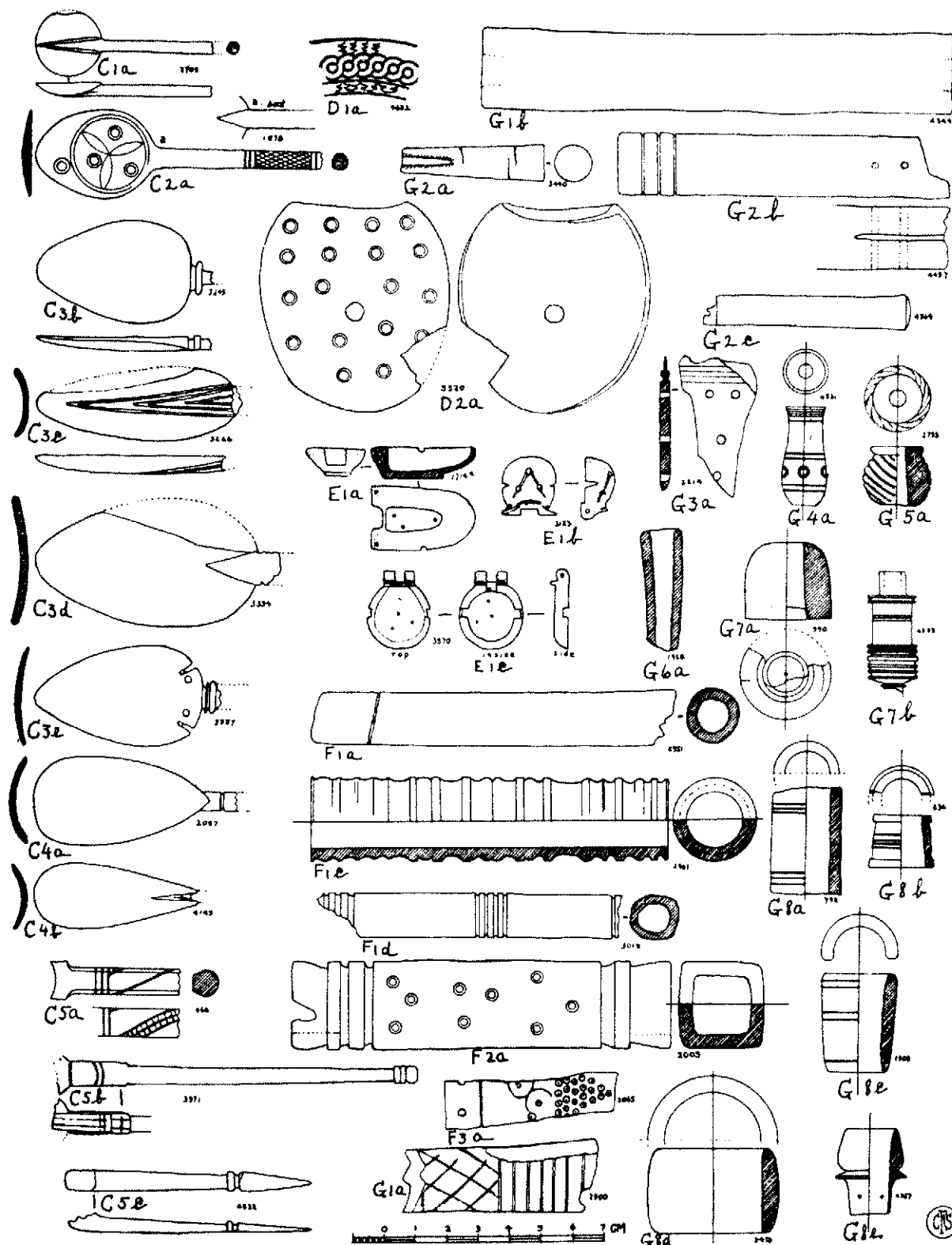
d. Reg. No. 3334, S5 c, July 5, 1910. L. of bowl, 7 cm.

e. Reg. No. 3557, S6 g, July 19, 1910. L. of bowl, 5.5 cm. See Pl. 83 g 2.

5. Spoon-handles.

a. Reg. No. 968, Bas. 2d stratum, June 26, 1909.

b. Reg. No. 3971, Kaid's Land a, Aug. 18, 1910. L., 12 cm. (trace of bowl).



240. Bone objects, types C 1 to G 8. Scale 1:2.

4. Largespoons, with blunt-ended ovoid bowls, dished.

a. Reg. No. 2057, L. T. 5, Sept. 11, 1909. L. of bowl, 5.5 cm.

b. Reg. No. 4145, Kaid's Land SW, Aug. 30, 1910. L. of bowl, 5.3 cm.

c. Reg. No. 4522, Kaid's Land, Sept. 15, 1910. L., 8.1 cm. (with sharp tip and trace of bowl).

d. Reg. No. 4207, S8 b, Sept. 3, 1910. L., 9.9 cm. (sharp tip, no trace of bowl). See Pl. 83 h 3.

D. DECORATED SHELLS<sup>1</sup>

1. Large bivalve shell decorated inside along the edge with a guilloche and zigzag border.
  - a. Reg. No. 4682, S10 b, Sept. 28, 1910. The largest piece is 6.5 cm. long.
2. Piece of a large univalve shell, decorated outside

with dotted circles. See Pl. 83 d. The edge of one end turns up to form a ledge (for fastening to a shaft?). Pierced with a hole in middle.

a. Reg. No. 3320, S5 b, July 4, 1910.

## E. BOX-LIDS

A few well-worked bone objects were found, with perforated hinges, which seem to be lids of kohl-tubes or cosmetic-tubes.

- a. Reg. No. 1714a, vault cistern 2, Aug. 21, 1909. L., 3.2 cm.; width, 2.2 cm.; height, 0.5 cm. Three holes through flat top.
- b. Reg. No. 3123, S2-32 sub, June 28, 1910. Round, with projecting hinge, 1.19 mm. W.,

12 mm.; h., 10 mm.; three holes through round top.

- c. Reg. No. 3570, S6 g, July 21, 1910. Disc-shaped with projecting hinge. L., 25 mm.; diam. of disc, 20 mm.; thickness, 5 mm.; depth of hollow inside, 2 mm. Four holes through top. See Pl. 83 g 8.

## F. KOHL-POTS AND TOILET-BOXES

1. Sections of animal leg bones dressed by turning to cylindrical forms, hollowed and plugged at one end. Usually decorated. Those with wide cavity are classed as kohl-pots; those with narrow cavity, as handles. Classification therefore uncertain.
  - a. Reg. No. 2951, S. G. T. 6, June 22, 1910. L., 11.5 cm. See Pl. 83 e 2.
  - b. Reg. No. 2960, S. G. T. 6, June 22, 1910. L., 3.6 cm. (broken). See Pl. 83 e 5.
  - c. Reg. No. 2961, S. G. T. 6, June 22, 1910. L., 11.5 cm. See Pl. 83 e 1.
  - d. Reg. No. 3018, S. G. T. 1, June 24, 1910.
  - e. Reg. No. 4674, S8-883, Sept. 27, 1910. L., 5.8 cm. (broken). See Pl. 83 f 2.
2. Section of leg bone dressed to a square form, decorated with dotted circles.
  - a. Reg. No. 2005, L. T. 2 a, Sept. 3, 1910. L., 12 cm.
3. Fragments of bone plates, usually decorated with dotted circles, used as inlays in wooden toilet boxes.
  - a. Reg. No. 2065, L. T. 5 b, Sept. 13, 1909. L., 55 mm.; 2.5 mm. thick. Holes for pegging to box.
  - b. Reg. No. 3066, S. G. T. 4, June 25, 1910. Strip, 4 cm. long (broken) and 9 mm. wide. See Pl. 83 a 3.

## G. HANDLES

1. Cylindrical bone handle, with round cavity.
  - a. Reg. No. 2900, S. G. T. 3, June 21, 1910. L., 6.3 cm. (broken).
  - b. Reg. No. 4544, S9-906 deep, Sept. 17, 1910. L., 15 cm. See Pl. 83 f 1.
2. Cylindrical bone handle, with slot and rivet holes (see also A 1, above).
  - a. Reg. No. 3440, L. T. E. b, July 12, 1910. L., 4.6 cm.
  - b. Reg. No. 4457, Samarra's Land c, Sept. 10, 1910. L., 9.7 cm.
  - c. Reg. No. 4564, S8 c deep, Sept. 10, 1910. L., 6.6 cm.
3. Flat bone plate, with rivet holes for fastening to haft of blade.
  - a. Reg. No. 3214, S5 b, July 1, 1910. See Pl. 83 b 2.
4. Small round knob, with hole for awl,<sup>2</sup> decorated with dotted circles.
  - a. Reg. No. 4531, S8 d, Sept. 16, 1910. L., 3.3 cm.
5. Knob handle, with hole for awl, decorated.<sup>2</sup>
  - a. Reg. No. 2755, Roadway, July, 1909. L., 2 cm.
6. Small hollow bone, handle for awl.<sup>2</sup>
  - a. Reg. No. 1458, S1 top dirt, June 7, 1909. L., 3.9 cm.
  - b. Reg. No. 1830, H. S. 2, July 12, 1909. L., 3.8 cm.
7. Turned handle or handle knob, with small round hole.<sup>2</sup>
  - a. Reg. No. 990, Bas. under late wall on west, June 29, 1909. L., 2.5 cm.
  - b. Reg. No. 4559, S9 a, Sept., 1910. L., 3.8 cm.

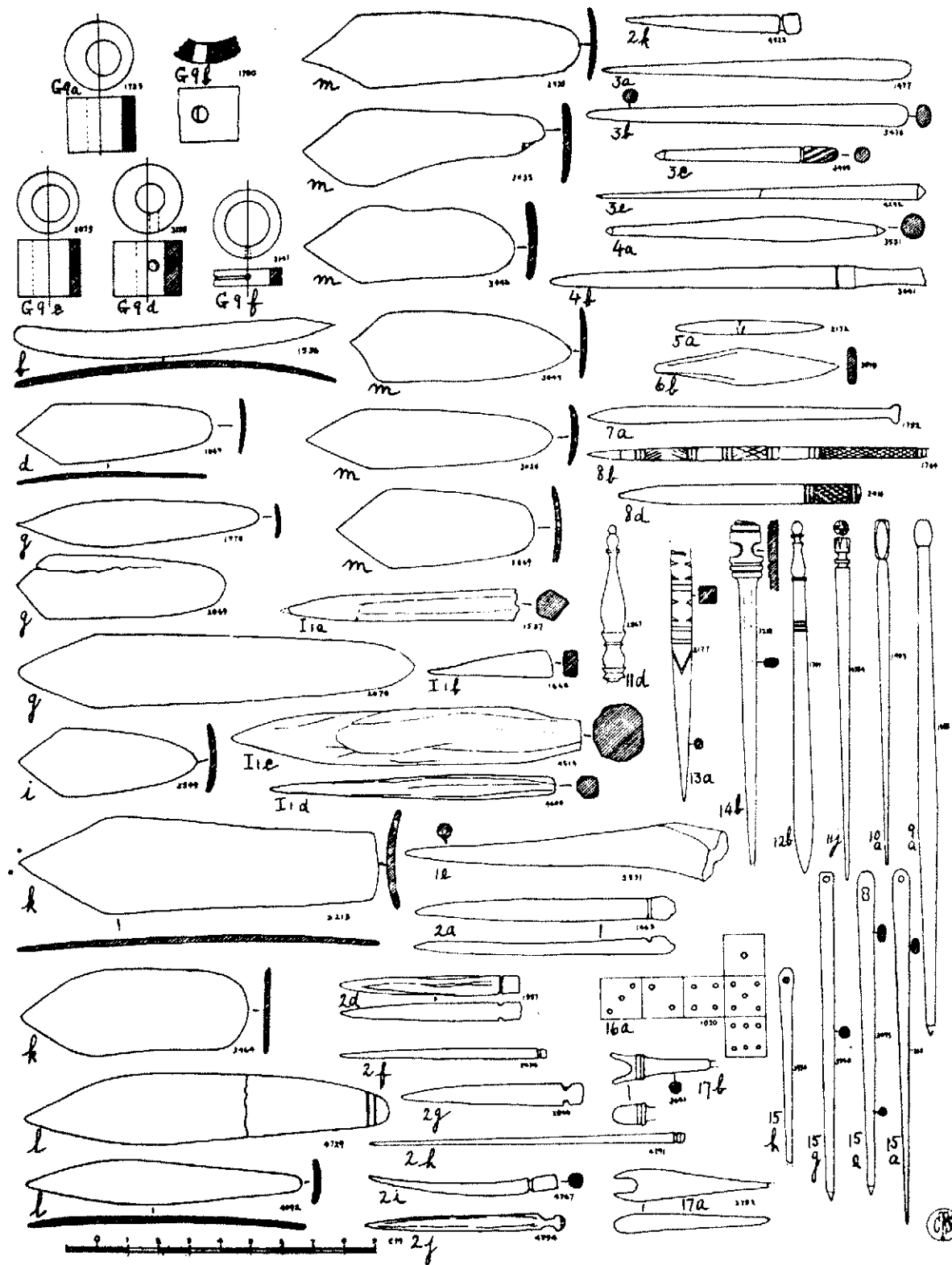
<sup>1</sup>See Macalister, Gezer, II, p. 46.

<sup>2</sup>Possibly for bone points.

8. Turned handle or handle knob, with large hole.

- a. Reg. No. 792, Bas. 2d stratum, June 4, 1909. L., 3.5 cm.
- b. Reg. No. 836, Bas. 2d stratum, June 10, 1909. L., 1.8 cm.
- c. Reg. No. 1508, Bas. cist. 1, July 19, 1909. L., 3.2 cm.

- a. Reg. No. 1733, vault cistern 2, Aug. 21, 1909. L., 16 mm.; diam., 22 mm. See Pl. 83 i 1.
- b. Reg. No. 1780, vault cistern 2, Aug. 28, 1909. L., 16 mm.; hole in side; broken. See Pl. 83 i 2.
- c. Reg. No. 2075, L. T. 5, Sept. 14, 1909. L., 19 mm.; diam., 20 mm.



241. Bone objects, types G 9 to I 17. Scale, 1:2.

- d. Reg. No. 2475, S3-306, Oct. 8, 1909. L., 2.8 cm.; diam., 4.2 cm.
- e. Reg. No. 4357, Samarra's Land b 5, Sept. 5, 1910. L., 2.7 cm.; diam., 2.2 cm.

9. Cylindrical bone ring, sometimes with rivet in side. Handle ring (?). See Fig. 241.

- d. Reg. No. 3255, S5 f, July 2, 1910. L., 18 mm.; diam., 21 mm.; hole in side.
- e. Reg. No. 4569, S8 d N deep, Sept. 19, 1910. L., 21 mm.; diam., 21 mm.
- f. Reg. No. 2141, S3 c, Sept. 28, 1909. H., 5 mm.; diam., 22 mm.; hole in side.

## H. FLAT BONE SPATULÆ OR STYLI

A large number of flat bone objects were found, rounded at one end and sharpened at the other. Macalister (Gezer, II, p. 274) explains these objects as styli for writing on wax or clay, and states that they were found in all periods from 1800 B.C. down. At Samaria they were found in Israelite debris and in the debris of all the periods antedating the Roman. The very extent in time and the number of these objects raises a doubt as to their use as styli. In any case they were not used for cuneiform writing, which at present is the only writing on clay known to us in Palestine. That wooden tablets covered with wax were used in Palestine as early as Macalister's Second Semitic Period, 1800-1400 B.C., during the period of the Tel Amarna tablets, and continued in use alongside papyrus, parchment, and ostraca, down to Roman times, without leaving any other trace than these bone points, seems to me scarcely plausible. At the same time, I feel at a loss to offer a plausible explanation. They may be small implements used in one of the common household industries.

The examples given on Pl. 83 show the various forms of this implement. The examples vary from 6 to 15 cm. in length. They were found at all places at Samaria and in all kinds of debris (except the masons' debris from the Israelite palace). The following list of selected examples will serve to show the distribution (see Fig. 241):

- |  |  |
|--|--|
| a. Reg. No. 1000, Bas. 2d stratum.         | j. Reg. Nos. 3925 and 4039, S4-417 floor of Ahab courtyard.  |
| b. Reg. Nos. 1534 to 1536, S1 cist. 7.     | k. Reg. Nos. 3213 (Pl. 83 b 3), 3216 (Pl. 83 b 1), 3406, 3464 (Pl. 83 c 4), S5.  |
| c. Reg. No. 1550, S2 room 55 on floor.     | l. Reg. Nos. 4092, 4729, S10.  |
| d. Reg. No. 1669, S2 cistern 13.           | m. Reg. Nos. 2887, 2918, 2935 (Pl. 83 e 7), 2936, 3035, 3042, 3046, 3049 (Pl. 83 a 5), 3050 (Pl. 83 a 4), 3069 (Pl. 83 a 2), 3094, S. G. T. 2 to 11. |
| e. Reg. Nos. 1762 and 1779, vault cist. 2. |  |
| f. Reg. No. 1963, L. T. 1 room 1.          |  |
| g. Reg. Nos. 1978, 2069, 2070, 2152, L. T. |  |
| h. Reg. No. 2757, S3-303.                  |  |
| i. Reg. No. 3509, S4-361.                  |  |

## I. BONE POINTS, PIERCERS, KOHL-STICKS, AND NEEDLES

1. Points or piercers, with smooth, worn, sharp tips, and roughly dressed shaft, probably fixed originally in a wooden or bone handle or wrapped with cloth or leather.
  - a. Reg. No. 1537, S1 cistern 7, July 6, 1909. L., 7 cm.; length of worn tip, 2.5 cm.
  - b. Reg. No. 1660, S2-43 sub, Aug 31, 1909. L., 4 cm.; length of worn tip, 1.5 cm. See Pl. 66 h 8.
  - c. Reg. No. 4514, S7-773, Sept. 15, 1910. L., 11 cm.; length of worn tip, 3 cm. See Pl. 83 f 3.
  - d. Reg. No. 4600, S11 old dump, Sept. 21, 1910. L., 9 cm.

The following had no handle, but an undressed natural enlargement as a butt; the shaft is slender.

  - e. Reg. No. 3391, S5 Seleucidan street, July 8, 1910. L., 10.2 cm.
2. Points similar to No. 1, but more slender, with a notch at the butt, possibly for attaching a thread or string. These go back at least as far as the early Post-Israelite period.
  - a. Reg. No. 1463, S1 top dirt, June 10, 1909. L., 8.3 cm.
  - b. Reg. No. 1506, S2-31 above floor, July 9, 1909. L., 7.4 cm.; tip gone.
  - c. Reg. No. 1594, S2-45 sub, Aug. 4, 1909. L., 6.2 cm.
  - d. Reg. No. 1957, L. T. 1 b cave 3, Aug. 27, 1909. L., 5.7 cm.
  - e. Reg. No. 2404, S3 e, Sept. 28, 1909. L., 9.1 cm.; tip gone.
  - f. Reg. No. 2474, S3 street W, Oct. 6, 1909. L., 6.6 cm.
  - g. Reg. No. 2846, N. G. T. 4, June 17, 1910. L., 5.8 cm.
  - h. Reg. No. 4291, Samarra's Land b 5, Sept. 5, 1910. L., 9.9 cm.
  - i. Reg. No. 4767, S8 above Greek Fort Wall, Oct. 6, 1910. L., 5 cm. (curved).
  - j. Reg. No. 4894, S11 y, Oct. 17, 1910. L., 6.4 cm.
  - k. Reg. No. 4923, S11-1 deep, Oct. 22, 1910. L., 5.7 cm.
3. Slender bone piercer, with one tapering, sharp point.
  - a. Reg. No. 1477, H. S. 1, June 17, 1909. L., 10 cm.
  - b. Reg. No. 3478, L. T. E., July 12, 1910. L., 10.3 cm. See Pl. 83 c 1.
  - c. Reg. No. 3499, L. T. E., July 14, 1910. L., 6 cm. (broken); blunt end decorated with spiral lines.

The following have short, conical butt.

  - d. Reg. No. 4208, Samarra's Land b, Sept. 3, 1910. See Pl. 83 h 2.
  - e. Reg. No. 4292, Samarra's Land b 5, Sept. 5, 1910. L., 10.6 cm.

4. Bone pin, swelling near the middle, with blunt drill-like points at each end, perhaps bow-drill point.
  - a. Reg. No. 3551, S6 f, July, 1910. L., 9 cm. See Pl. 83 g 4.
  - b. Reg. No. 3041, N. G. T. 10, June 24, 1910. L., 12 cm. (broken).
5. Bone pin, with two tapering ends, possibly a bobbin.
  - a. Reg. No. 2172, S3 c just above packed Israelite debris, Oct. 5, 1909. L., 4.7 cm.
  - b. Reg. No. 2175, S3 b in packed Israelite debris, Oct. 5, 1909. L., 4.7 cm.
6. Broad flat pin, with two pointed ends, possibly a bobbin.
  - a. Reg. No. 3352, S5 f, July 6, 1910. L., 7.5 cm. (originally); width, 12 mm.
  - b. Reg. No. 3510, S5-361, July 14, 1910. L., 6 cm.; width, 14 mm.
7. Bone kohl-stick, with blunt point on one end, and small flat spoon or spade on the other.
  - a. Reg. No. 1782, vault cistern 2, Aug. 30, 1909. L., 9.9 cm. See Pl. 83 i 8.
  - b. Reg. No. 1958, L. T. 1 cave 3, Aug. 27, 1909. L., 10.1 cm.
8. Bone point, with thick, cylindrical shaft, decorated with incised lines. Unfortunately all specimens are broken. The points are blunt, excepting b and g.
  - a. Reg. No. 1740, vault cistern 2, Aug. 24, 1909. L., 6.5 cm. (butt broken off); diam., 0.65 cm. See Pl. 83 i 5.
  - b. Reg. No. 1764, vault cistern 2, Aug. 26, 1909. L., 11 cm. (tip of butt off); diam., 0.5 cm. See Pl. 83 i 6.
  - c. Reg. No. 2138, S3 b, Sept. 23, 1909. L., 7.2 cm. (both ends off); diam., 0.7 cm.
  - d. Reg. No. 2416, S3 e, Oct. 2, 1909. L., 7.8 cm. (butt off); diam., 0.6 cm.
  - e. Reg. No. 3848, S6 g, Aug. 10, 1910. L., 11 cm. (both ends off); diam., 0.8 to 0.4 cm.
  - f. Reg. No. 4520, Kaid's Land, Sept. 15, 1910. L., 6.7 cm. (both ends off); diam., 0.7 cm.
  - g. Reg. No. 1763, found with b, above. See Pl. 83 i 4.
9. Bone pin, slender, with plain round head.
  - a. Reg. No. 1685, S2 cistern 13 (Preherodian), Sept. 7, 1909. L., 16.5 cm.
  - b. Reg. No. 1356, Bas. room 9 (200-300 A.D.), June 26, 1909. Broken.
  - c. Reg. No. 4199, Samarra's Land a, Sept. 3, 1910. L., 11.7 cm. See Pl. 83 h 5.
  - d. Reg. No. 4459, Samarra's Land b, Sept. 10, 1910. L., 11.1 cm.
10. Bone pin, slender, with plain, square head.
  - a. Reg. No. 1403, Bas., coin room, under base, Aug. 10, 1909. L., 11 cm.
  - b. Reg. No. 3380, S8 h E, July 8, 1910.
11. Bone pin, slender, with ornamented, turned head. Such pins were found all over the site, but in exceptional numbers at Kaid's Land. Very few were whole. A selection follows:
  - a. Reg. No. 989, Bas. under late wall W, June 29, 1909. L., 8.8 cm.
  - b. Reg. No. 2395, S3 d, Sept. 23, 1909. L., 10.5 cm.
  - c. Reg. No. 2566a, vault E side, hard debris, Aug. 17, 1909. Head only.
  - d. Reg. No. 2867, S. G. T. 6, June 20, 1910. Head only.
  - e. Reg. No. 3479, L. T. E., July 13, 1910. See Pl. 83 c 3.
  - f. Reg. No. 3506, L. T. E., July 14, 1910.
  - g. Reg. No. 3936, Kaid's Land, vault, Aug. 17, 1910.
  - h. Reg. No. 3939, Kaid's Land, vault, Aug. 17, 1910.
  - i. Reg. No. 3943, Kaid's Land, vault, Aug. 17, 1910.
  - j. Reg. No. 4354, Samarra's Land b 5, Sept. 5, 1910. L., 11 cm. (whole); carved head. See Pl. 83 h 6.
12. Thick, heavy points, with turned heads.
  - a. Reg. No. 1734, vault cist. 2, Aug. 23, 1909. See Pl. 83 i 3.
  - b. Reg. No. 1781, vault cist. 2, Aug. 28, 1909. L., 11.3 cm. See Pl. 83 i 7.
13. Bone point, with tapering round point and square shaft, with incised decoration.
  - a. Reg. No. 3177, S5 a, June 30, 1910.
14. Bone pins, with tapering round point and flat shaft, ending in a broad decorated head.
  - a. Reg. No. 2098, L. T. 5 above street, Sept. 15, 1909.
  - b. Reg. No. 3218, S5 b, July 1, 1909. L., 11 cm. See Pl. 83 b 5.
  - c. Reg. No. 4893, S11 y, Oct. 17, 1910.
15. Bone needles, with pierced eye in flat broad end; slender, sharp-pointed.
  - a. Reg. No. 1355, Bas., coin room, June 26, 1909. L., 10.4 cm.
  - b. Reg. No. 1395, Bas. cistern 1, July 20, 1909. L., 8.3 cm. (originally ca. 9 cm.).
  - c. Reg. No. 2015, L. T. 3 a, Sept. 7, 1909. L., 8.6 cm. (tip off).
  - d. Reg. No. 3481, L. T. E., July 13, 1910. L., 5.5 cm. (both ends off).
  - e. Reg. No. 3495, L. T. E., July 14, 1910. L., 10.5 cm.
  - f. Reg. No. 3498, L. T. E., July 14, 1910. L., 11 cm. Blunt point.
  - g. Reg. Nos. 3923, 3937, 3938, 3940, 3941, 3942, 3945, 3972, in various parts of Kaid's Land, but mostly in the vault, Aug. 16-18, 1910. L., 8-11 cm. Roman.
  - h. Reg. No. 3956, S6-626, Aug. 17, 1910. Roman.
  - i. Reg. Nos. 4293, 4353, Samarra's Land a5 and b5, Sept. 5, 1910. L., 13 cm. and 11 cm. See Pl. 83 h 1 (eyelet broken and pierced again lower down); Pl. 83 h 4.

16. Dice, 10–14 mm. cube, marked with dotted circles. The one and six are on opposite sides, as are the two and five, and the three and four. The three was in four cases on the left of the two (with the ace held upwards), and in two cases on the right. All these were Roman.

- a. Reg. Nos. 1020–1022, Bas. cistern, July 12, 1909.
- b. Reg. Nos. 1346–1347, 1359, Bas., coin room, June 26, 1909.

c. Reg. No. 2754, Gateway (Roman house), Aug., 1909.

17. Bone points, with forked head.

- a. Reg. No. 2752, Gateway (angle between N Tower and Herodian wall), July 5, 1909. L., 5 cm. (broken).
- b. Reg. No. 3641, S6 a F, July 27, 1910. L., 3.4 cm.

#### J. DISCS (INLAYS?), DECORATIVE BUTTONS, WHORLS, BEADS

It is very difficult to determine the exact purpose of each of these objects. They were found widely distributed and in numbers throughout the black debris,—Greek, Hellenistic, and Roman.

1. Button (?). Round, with four grooves for fastening with thread.

- a. Reg. No. 4612, S7–772, Sept. 21, 1910.

2. Flat disc, pierced with small hole, slightly beveled edge.

- a. Reg. No. 2898, S. G. T. 3, June 21, 1910. Diam., 2.6 cm.; 4 mm. thick.

3. Flat disc, unpierced, one side with molded ring.

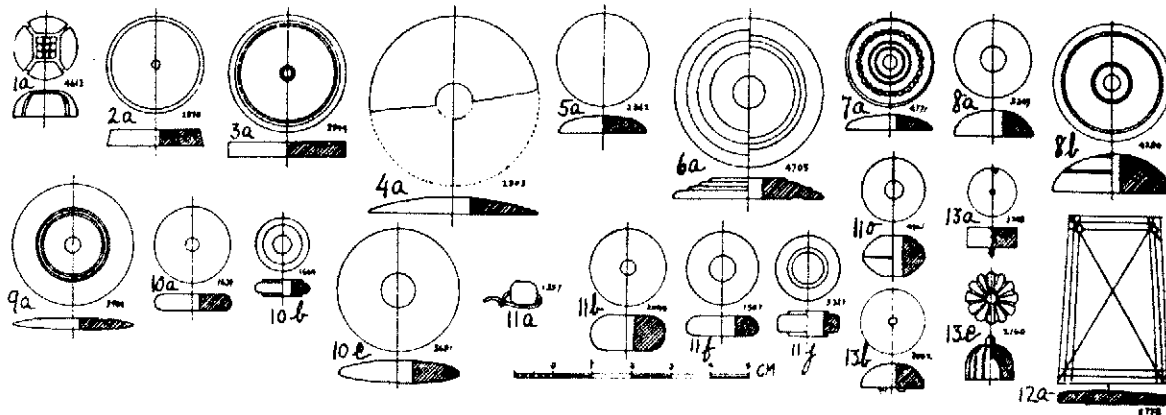
- a. Reg. No. 2944, N. G. T. 5, June 24, 1910. Diam., 3.2 cm.; 3 mm. thick. See Pl. 83 e 6.

8. Whorl-shaped discs.

- a. Reg. No. 3249, S5 c, July 1, 1910. Diam., 2 cm.; 7 mm. thick. Plain.
- b. Reg. No. 4290, Samarra's Land b 5, Sept. 5, 1910. Diam., 3 cm.; 10 mm. thick. Incised circles on top.

9. Flat disc, both sides slightly rounded. One side ornamented with incised circles. Small hole.

- a. Reg. No. 3986, Kaid's Land N, Aug. 19, 1910. Diam., 3.1 cm.; 2.5 mm. thick.



242. Bone objects, types J 1 to J 13. Scale, 1:2.

4. Flat disc, plano-convex, large hole.

- a. Reg. No. 2503, S3 street E, Oct. 11, 1909. Diam., 4.3 cm.; 4 mm. thick.

5. Round-topped disc, unpierced.

- a. Reg. No. 2862, S. G. T. 1, June 20, 1910. Diam., 2.2 cm.; 4.5 mm. thick.

6. Round-topped disc, molded top. Two incised circles in bottom. Large hole.

- a. Reg. No. 4705, S2 pavement of street sub, Sept. 29, 1910. Diam., 3.8 cm.; 5 mm. thick.

7. Round-topped disc, ornamented top (dot and circle). Small hole.

- a. Reg. No. 4771, S9–901, Oct. 7, 1910. Diam., 2.2 cm.; 4 mm. thick.

10. Discs, both sides alike. Various sizes.

- a. Reg. No. 1639, S2 III 43 sub, Aug. 30, 1909. Diam., 2 cm.; 4 mm. thick.
- b. Reg. No. 1664, S2 tunnel to S1 cist. 7. Diam., 1.4 cm.; 4 mm. thick.
- c. Reg. No. 3681, L. T. E., July 28, 1910. Diam., 3.1 cm.; 6 mm. thick.
- d. Reg. No. 4558, S8 e S, Sept. 19, 1910. Diam., 21.5 cm.; 4 mm. thick.
- e. Reg. No. 2084, L. T. room 53, Sept. 13, 1909. Diam., 3 cm.
- f. Reg. No. 2756, L. T. room 53 cist., Oct. 13, 1909. Diam., 1.7 cm.
- g. Reg. No. 4190, SS b, Sept. 2, 1910. Diam., 1.8 cm.



## 11. Beads.

- a. Reg. Nos. 1348 and 1357, Bas., coin room, June 26, 1909. Diam., 11 mm. Band form. One is strung on a bronze wire.
- b. Reg. No. 2040, L. T. room 39 sub, Sept. 9, 1909. Diam., 19 mm. Ring form.
- c. Reg. No. 2472, S3 street W, Oct. 5, 1909. Diam., 18 mm. Ring form.
- d. Reg. No. 1453, S1 N, June 4, 1909. Diam., 20 mm. Ring form.
- f. Reg. No. 1507, S2 middle top dirt, July 17, 1909. Diam., 18 mm. Disc form.
- g. Reg. No. 1568, S2 top debris above S wall of temple, July 23, 1909. Diam., 2.1 cm. Disc form.
- h. Reg. No. 3168, N. G. T. 4, June 29, 1910. Diam., 18 mm. Ring form.
- i. Reg. No. 3171, N. G. T. 6, June 30, 1910. Diam., 15 mm. Ring form.
- j. Reg. No. 3323, S5 h, July 4, 1910. Diam., 15 mm. Band form.
- k. Reg. No. 3632, S6 f, July 26, 1910. Diam., 17 mm. Ring form. See Pl. 83 g 6.

- l. Reg. No. 4824, S11-5 sub, Oct. 5, 1910. Diam., 17 mm. Ring form.

Sharp-edged ring-beads, 16 mm. to 22 mm. in diameter:

- m. Reg. No. 3098, S2-68, June 26, 1910.
- n. Reg. No. 4463, S7-755, Sept. 12, 1910.
- o. Reg. No. 4561, S8 c deep, Sept. 19, 1910.

Cylindrical beads:

- p. Reg. No. 1979, L. T. 5 d, Aug. 28, 1909. L., 6 mm.; diam., 7 mm. See Fig. 247.

- 12. Flat plate, nearly rectangular, with hole in each upper corner. Incised lines on face. Perhaps a pendant.

- a. Reg. No. 2758, S4 g top debris, Oct. 23, 1909. L., 4.2 cm.; width, 2.3 cm. (above) and 2.8 cm. (below).

## 13. Miscellaneous.

- a. Reg. No. 3288, S5 c, July 2, 1910.
- b. Reg. No. 3002, S. G. T. 3, June 23, 1910.
- c. Reg. No. 2160, S3 b SE, Oct. 4, 1909. Needle-cap?

## CHAPTER XI

### AMULETS, SEALS, AND BEADS

A number of Egyptian amulets, scarabs, and beads were found, but unfortunately none of them can be exactly dated. Most of these objects are known, however, in Egypt from a period contemporaneous with the Israelite occupation of Samaria. The Egyptian gold scarab ring and the Assyrian letter-sealing are also assumed to be of the Israelite period, on account of their form. The club-shaped pendants ornamented with dotted circles were found in Israelite debris. The other objects are for the most part Hellenistic.

#### A. AMULETS AND SCARABS

##### I. Amulets

A small number of Egyptian amulets were found, identical in material, technique, and form with Egyptian amulets of the Late, the Saitic, and the Ptolemaic periods. They are undoubtedly of Egyptian manufacture, but not exactly datable.

1. Kneeling figure of Shu, pale blue Egyptian faience.
  - a. Reg. No. 1646, L. T. 1 cave 3, Aug. 28, 1909. Lower part only. H., 1.4 cm. See Pl. 57 b 2.
2. Figure of Bes, pale blue-green Egyptian faience.
  - a. Reg. No. 4402, S9-913 sub, Sept. 6, 1910. Lower part only. H., 1.8 cm.
  - b. Reg. No. 4632, S7-772, Sept. 23, 1910. Head and feet gone. H., 2.4 cm.
3. Figure of a goddess, standing, blue Egyptian faience.
  - a. Reg. No. 4545, S8 d N deep, Sept. 17, 1910. Feet only. H., 1.8 cm.
4. Figure of a seated goddess, blue-green Egyptian faience.
  - a. Reg. No. 3780, S4-406 sub, Aug. 6, 1910. Upper part gone. H., 1.5 cm.
5. Sacred eye, pale-green Egyptian faience.
  - a. Reg. No. 2789, S3 under wall between rooms 322 and 323, Oct. 25, 1909. Front broken off. L., 3 cm. See Pl. 57 b 1.
  - b. Reg. No. 4107, S7-712 sub, Aug. 25, 1910. L., 2.5 cm. Black iris and eyebrow.
  - c. Reg. No. 4537, S8 d, Sept. 16, 1910. L., 2 cm.

##### II. Scarabs

The scarabs and scarabæoids found were easily divisible into those of Egyptian (Nos. 1-7, below), and those of Asiatic manufacture (Nos. 8-15, below). Nos. 1 and 2 were undoubtedly Israelite in time, being found on the floor of the Ahab courtyard and in the cave in S11 respectively. The only scarab bearing a cartouche is No. 8, with the name of Thothmes III, but unfortunately this name alone is not sufficient to date scarabs.<sup>1</sup> Almost all these scarabs may be of the Ptolemaic period quite as well as the Israelite, if their form and fabric is the only evidence to be considered.

1. Scarabæoid of blue frit, with figure of Bes. Pl. 56 e 8.
  - a. Reg. No. 3704, S4-406 on Ahab floor, Aug. 1, 1910.
2. Uninscribed scarab of blue frit.
  - a. Reg. No. 4857, S11 N cave, Oct. 14, 1910. This cave contained only Israelite potsherds.
3. Scarab of blue, glazed faience. See Pl. 56 e 6.
  - a. Reg. No. 2832, N. G. T. 1, June 16, 1910.
4. Scarab of blue, glazed faience. See Pl. 56 e 9.
  - a. Reg. No. 3593, S6 a, July 23, 1910.

<sup>1</sup>In the inner part of the pyramid temple of Mycerinus, we found an intrusive communal burial place containing mummies

of the Roman period. Coins of the first two centuries A.D. and scarabs of Thothmes III were found on the same mummies.

5. Scarab of green, glazed faience. Well made, perhaps Saitic work. See Pl. 56 e 7.
  - a. Reg. No. 3980, S6-626 E beside Fort Wall, Aug. 18, 1910.
6. Scarab of blue, glazed faience. See Pl. 56 e 10.
  - a. Reg. No. 4295, Samarra's Land b, Sept. 5, 1910.
7. Scarabæoid of pale blue faience, with inscribed plate broken off.
  - a. Reg. No. 4858, S10 d, Oct. 13, 1910.

The following are non-Egyptian:
8. Ivory scarab, with cartouche of Thothmes III. See Pl. 56 e 3. I do not know an exact duplicate in Egypt. This may be a local imitation of an Egyptian scarab.
  - a. Reg. No. 3639, S6 e surface, July 27, 1910.
9. Ivory scarab, very flat. Pl. 56 e 2.
  - a. Reg. No. 3715, S4-413, on floor of Ahab courtyard, Aug. 3, 1910.
10. Ivory scarabæoid (Pl. 56 e 1), with figure of a horse (?).
11. Slate scarabæoid (Pl. 57 a 2). Bearded figure with hands uplifted before a plant.
  - a. Reg. No. 1840, H. S. 1, July 22, 1909.
12. Slate scarabæoid (Pl. 57 a 7), with two animals facing.
  - a. Reg. No. 2810, Gateway houses, Aug. 16, 1909.
13. Black stone scarabæoid (Pl. 56 e 4).
  - a. Reg. No. 3586, S4-349 sub, July 22, 1910.
14. Gray stone scarabæoid, uninscribed.
  - a. Reg. No. 3296, S4-351, July 4, 1910.
15. Scarabæoid of pale blue translucent glass (uninscribed?).
  - a. Reg. No. 1833, H. S. 3, July 20, 1909.
16. Scarabæoid of crystal (Pl. 56 e 5).
  - a. Reg. No. 3432, S5-361, July 12, 1910.
17. See gold scarab ring of Egyptian origin (Reg. No. 4635), Chapter IX C No. 7 a.

## B. SEALS

## I. Cylinder seals

1. Cylinder seal of dark gray stone; inscription obscure. Egyptian rather than Babylonian. See Pl. 57 a 6.
  - a. Reg. No. 1997, L. T. 1 c, Sept. 2, 1909. L., 21 mm.; diam., 10 mm.

## II. Cone seals of the Persian Period or later

1. Cone seal, of lapis lazuli, with standing figure of a god (Marduk with the axe?). Pl. 57 a 1.
  - a. Reg. No. 2456, L. T. 1 b cave 3, Aug. 27, 1909.
2. Eight-sided cone seal, with god before an altar with tree and spear (?). Above is a rayed sun. Pl. 57 d 7. Milky white agate (or similar translucent stone).
  - a. Reg. No. 3592, L. T. deep, July 23, 1910.
3. Oval cone seal, with sun and crescent. Pl. 57 d 6. Crystal-like agate (?).
  - a. Reg. No. 3017, S. G. T. 2, June 24, 1910.
4. Cone seal. Eagle with outspread wings *en face*. Pl. 57 a 5. Pale blue translucent glass, iridescent white patina.
5. Cone seal, with lion. Pl. 57 a 4. Pale blue translucent glass, iridescent white patina.
  - a. Reg. No. 1850, S2 II 7 upper stratum, July 31, 1909.
6. Cone seal, with animal. Pl. 57 a 3. Pale blue translucent glass, iridescent white patina.
  - a. Reg. No. 2774, S3-303 west above Ahab wall, Oct. 13, 1909.
7. Unfinished cone of hæmatite. Roughly chipped into shape, bottom smoothed for inscription, hole through upper end. Probably used as an amulet.
  - a. Reg. No. 3081, S2 III 68, June 26, 1910.

## III. Finger rings and ring-seals

1. Egyptian gold ring, with gold scarab seal. Pl. 56 d.
  - a. Reg. No. 4635, S8-885 west of Greek Fort Wall deep, in broken yellow debris mixed with Israelite potsherds, Sept. 23, 1910.
2. Bronze ring, with oval bezel, of one piece, Hellenistic. Pl. 57 d 9. Naked male figure standing with staff in l. hand.
  - a. Reg. No. 4929, S6 f, July 25, 1910.

3. Bronze ring, with oval bezel, of one piece. Pl. 57 d 10. Figure of a swan (crane?).  
a. Reg. No. 4723, S8-881, Sept. 29, 1910.
4. Small silver ring, with round bezel inlaid with a rosette in gold (not a seal). Pl. 57 a 10.  
a. Reg. No. 2809, S3 b, Sept. 28, 1909.
5. Silver ring, with oval bezel (a separate piece soldered on). Pl. 57 d 11. Uninscribed.  
a. Reg. No. 2998, S. G. T. 3, June 23, 1910.
6. Bronze ring, with black stone gem. Weasel (?) and hare. Pl. 57 a 8.  
a. Reg. No. 1372, Bas. cistern 1, July 22, 1909. The other contents of this cistern included 61 Roman coins (Reg. Nos. 1195-1255) of the Third and Fourth Centuries A.D. No object was found which could be dated previous to 200 A.D.
7. Brown jasper gem; in the middle, an altar (?); on each side, a cornucopia surmounted by a crane. Pl. 57 d 1.  
a. Reg. No. 4294, Samarra's Land a (long room), Sept. 5, 1910.
8. Uninscribed stone gems.  
a. Reg. No. 3072, S. G. T. 2, June 25, 1910. Agate. See Pl. 83 a 9.  
b. Reg. No. 4852, S11 y surface, Oct. 12, 1910.
9. Uninscribed stone ring-sets, with rounded tops and flat bottoms.  
a. Reg. No. 1800, vault cistern 1, Sept. 2, 1909. Ruby.  
b. Reg. No. 4724, S2 portico sub, Seleucidan street, Sept. 29, 1910. Emerald.
10. Uninscribed stone ring-sets of scarabæoid form.  
a. Reg. No. 3926, above west wall of temple, Aug. 15, 1910. Round, unpierced. Hematite. Pl. 57 d 4.  
c. Reg. No. 2022, L. T. 3 a 39, Sept. 8, 1909. Oval, pierced lengthwise. Brown agate.  
d. Reg. No. 3432, S4-361, July 12, 1910. Oval, pierced lengthwise. Crystal. Pl. 56 e 5.
11. Iron ring, with oval bezel, of one piece, corroded.  
a. Reg. No. 3710, S7 a (top dirt), Aug. 2, 1910.
12. Iron ring, with glass set. Glass sets or inlays, of pale blue or green translucent glass, with iridescent white patina, uninscribed, were found in every part of the whole site, but always in black debris.  
a. Reg. No. 3336, S5 f, July 5, 1910. Figure of a bird. Opaque yellow glass.  
b. Reg. No. 3633, S6 a, July 26, 1910. Figure of Eros (?). Greenish glass.  
c. Reg. No. 4127, S10 c, Aug. 27, 1910. Inlay missing.
13. Iron ring, with oval bezel, of one piece, rusted.  
a. Reg. No. 1865, L. T. 1 b, Aug. 16, 1909.  
b. Reg. No. 2142, S3 f S, Sept. 28, 1909. Broken.

#### IV. Seal impressions on letter-sealings

1. Assyrian letter-seal, 4.4 cm. in diam., and 1.5 cm. thick, of light-brown baked clay, with string holes for attachment to letter or package. The impression is that of a round stamp (cone?), 3.5 cm. in diameter. The representation is a god or king holding a lion by the mane of his head, and stabbing him with a dagger (?) held in the right hand; in a guilloché border. Beautifully cut, Assyrian style. Above and below the impression, a single line of cuneiform writing giving the name of the addressee. "a-na m. ilu A-[shur ? . . .] in." Unfortunately the middle of the name was broken away when the sealing was broken in opening the letter or package. The empty space is 2 cm. long. See Pl. 56 a.  
a. Reg. No. 2925, S. G. T. 4, June 22, 1910. See Plan 10, the yellow wall south of the modern road. Over this wall was a sloping mound of broken yellow debris, evidently thrown out from the gateway during some building operation. The clay seal was in the yellow debris, close beside the Israelite wall.
2. Letter-seal, of sun-dried mud, an irregular disc about 23 mm. in diameter and 3 mm. thick. Was attached to a roll or package, and shows print of cloth on bottom. Impression of an oval stamp (cone seal?) 17 x 15 mm. in size, with a slightly concave surface. Representation of two winged sphinxes sitting on their haunches, back to back. See Pl. 57 d 3.  
a. Reg. No. 3028, S. G. T. 1, June 24, 1910.
3. Letter-seal, of sun-dried mud, an irregular disc about 22 mm. in diameter and 4 mm. thick. The cast on the bottom shows that it was pressed down over a string binding a roll or package. The impression is that of an oval stamp (cone seal?), about 15 x 10 mm. in size. The representation is shown on Pl. 57 h 3.  
a. Reg. No. 4727, S8-840 debris in rock, Sept. 30, 1910.
4. Fragment of lightly baked clay, with the impression of a Persian cylinder seal. Three fragments, not fitting together, were found in close proximity, and seemed to indicate a flat tablet with a smooth dark surface. Only one fragment, slightly rounded as if part of the edge, showed the impression of a clearly marked cylinder, about 20 mm. long. The representation is a god with a crown (Persian style), grasping a winged dragon by the throat. The edge of the cylinder was marked with rope-pattern line (in relief on the impression). See Pl. 57 h 1, 2.  
a. Reg. No. 4496, S8-814 sub, Sept. 14, 1910.

5. Small Greek letter-seal of unbaked clay, an irregular disc, about 15 mm. in diam. Impression of an oval seal, a little longer than the diameter of the lump of clay. Figure of naked god going to the right, with caduceus in left hand, and garment over right arm. See Pl. 57 d 2, and cf. seal impression, V 2, below.

a. Reg. No. 2831, N. G. T. 8, June 16, 1910.

6. Letter-sealing of unbaked clay, about 3 cm. in diameter, with one whole impression and edges of two others. Impression of an oval convex cone-seal, 18 x 13 mm. in size. Representation illegible, apparently figure of god, with spear, before altar, similar to seal IV 2, above.

a. Reg. No. 3810, S6 f, Aug. 9, 1910.

#### V. Seal impressions on pottery

Aside from the Greek jar stamps, which are treated in a separate chapter, three jar handles were found with impressions of ordinary seals.

1. Round handle, with a section 23 mm. in diameter, of hard black ware, with a smooth cream-colored slip. Impression of an oval seal, 15 x 12 mm., showing a winged sphinx with a long curled tail, and before it an obscure figure. See Pl. 57 f 1.

a. Reg. No. 2190, S3 a W, Oct. 6, 1909.

2. Loop handle of a two-handled wine-jar of Israelite-Greek form, of coarse red-black ware, with smooth reddish-brown surface. On the turn of the handle, the impression of an oval seal, 20 x 11 mm., showing a naked god standing, facing l., with caduceus in r. hand, and garment over left. See Pl. 57 f 2, and cf. seal IV 5, above.

a. Reg. No. 1516, II. S. 1, June 22, 1909.

3. Twin handle of small amphora, of fine drab paste. On upper turn, the deep impression of an oval seal, showing figure of Hermes (?) like 2.

a. Reg. No. 2435a, S3 street sub, Oct. 6, 1909.

4. Flat loop handle of a two-handled wine-jar of Israelite-Greek form, of coarse red-black ware, with smooth brown surface. On the upper attachment, impression of a circular stamp, showing a pomegranate.

a. Reg. No. 3308, S5 d, July 4, 1910. See Pl. 64 k.

#### C. PENDANTS AND BEADS

A large number of beads were found of carnelian, agate, slate, bone, blue-glazed faience, and glass. Most of the blue-glazed faience beads, the variegated glass beads, and the carnelian beads are identical in form, material, and technique with Egyptian beads of the Late, the Saitic, and the Ptolemaic Periods, and are in all probability of Egyptian origin. They cannot, however, be more exactly dated. The only evidence for the date of all these objects is the position in which they were found at Samaria.

#### I. Pendants

1. Ivory pendant in the form of a claw.

a. Reg. No. 1637, S2 in construction trench of

2. Club-shaped pendant, of bone, with hole through small end, and rows of dotted circles incised in lower end.

a. Reg. No. 3929, S4-417 sub, floor of Ahab courtyard, Aug. 15, 1910. L., 6.4 cm. Four rows of four circles each. Israelite.

b. Reg. No. 4012, S4-417 sub, floor of Ahab courtyard, Aug. 20, 1910. L., 5.4 cm. Three rows of circles, one of four and two of three each. Israelite.

3. Undecorated, club-shaped pendants, with hole through small end.

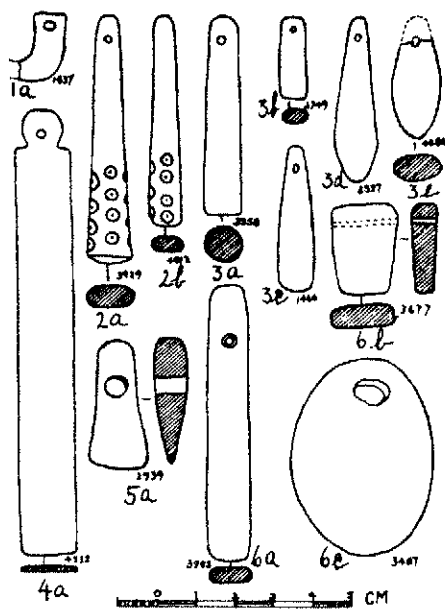
a. Bone, nearly cylindrical, Reg. No. 3558, S5 SW corner, black debris, July 20, 1910. L., 5.2 cm.

b. Slate, nearly cylindrical, Reg. No. 3749, S4 cist. 1, Aug. 5, 1910. L., 2.2 cm.

c. Gray stone, Reg. No. 1466, H. S. 1, June 15, 1909. L., 3.8 cm.

d. Slate, Reg. No. 3527, L. T. E., July 16, 1910.

e. Gray stone, wide flat form, Reg. No. 4086, S3 street W, Oct. 12, 1909.



243. Pendants. Scale, 1:2.

S wall of Herodian temple. Probably previous to 300 B.C.

4. Ivory pendant, long, thin, flat strip, rectangular form with eyelet at top. L., 12.3 cm. Perhaps used as a cosmetic spatula.

a. Reg. No. 4532, S9-905 N sub, Sept. 16, 1910.

5. Bone pendant, shaped like an axe-head. L., 3.4 cm. Polished.

a. Reg. No. 2939, N. G. T. 5, June 22, 1910. See Pl. 83 e 4.

6. Flat stone pendants.

a. Gray pebble, Reg. No. 3985, S6-626 E, Aug. 19, 1910.

b. Slate, Reg. No. 3677, L. T. E., July 28, 1910.

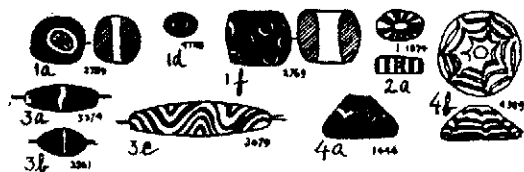
c. Pierced pebble, Reg. No. 3407, S5 h E, July 9, 1910. L., 5.2 cm. Perhaps a weight.

## II. Variegated glass beads

1. Eye-beads. Similar beads are found in Egypt from the New Empire down.

a. Reg. No. 2759, Gateway cistern 1, Aug. 14, 1909. Dark blue body with three eyes, each a dark blue spot encircled by a yellow band, a blue line, and a white band. Diam., 12 mm.

b. Reg. No. 4613, S8-804, Sept. 21, 1910. Like a. Diam., 9 mm.



244. Variegated glass beads. Scale, 1:2.

c. Reg. No. 4672, S10 b, Sept. 27, 1910. Pale blue glass body with four eyes, each a dark blue spot encircled by two white bands separated by a dark blue line. Diam., 10 mm.

d. Reg. No. 4725, S2 sub portico pavement, in Seleucidan street, Sept. 29, 1910. Black body with three eyes, each a black spot encircled by a white band, a black line, and a white band. Diam., 7 mm.

e. Reg. No. 2591, S3-321, Oct. 22, 1909. Black body, numerous eyes (ten?), each a blue spot encircled by a white band. Diam., 17 mm.; ring-shaped, broken.

f. Reg. No. 2769, L. T. 53 cistern, Oct. 13, 1909. Blue body with numerous eyes (ten), each a blue spot in a white circle.

g. Dis. No. 320, S3 street cistern, Oct. 22, 1909. Black body with three eyes, each a black dot in a red circle.

h. Dis. No. 1627, N. G. T. 4, June 16, 1910. Black body with eyes, each a black spot in a white circle. Decayed. Diam., 10 mm.

2. Eye-bead of disc form, pierced sidewise. Yellow eye dot on each flat face, surrounded by alternate blue and white rays (twelve of each). Made of glass filaments fused together. Size, 9 x 7 mm.; 4 mm. thick.

a. Reg. No. 1574, S2 above west part of Greek Fort Wall, July 27, 1909.

3. Barrel-shaped beads.

a. Reg. No. 3374, S5 Greek Fort Wall, July 7, 1910. Black body with white streak. L., 18 mm.

b. Reg. No. 3561, S5 SW corner, July 20, 1910. Black body with two white bands. L., 13 mm.

c. Reg. No. 3679, S6 c, July 28, 1910. Black body with parallel wavy white bands lengthwise. L., 35 mm.

4. Glass whorls or buttons, cone-shaped.

a. Reg. No. 1446, S1 N top stratum, June 3, 1909. Black body, with parallel looped white bands (seven loops) around the cone. H., 14 mm.; diam., 22 mm.

b. Reg. No. 4389, S9 under street floor, Sept. 6, 1910. Blue body with parallel looped yellow bands (seven loops) around cone. H., 9 mm.; diam., 20 mm.

## III. Plain glass beads

1. Ball beads.

a. Reg. No. 1993, L. T. 1 c slope, Sept. 1, 1909. Pale blue-green glass. Diam., 11.5 mm.

b. Reg. No. 2162, S3 b, Oct. 4, 1909. Deep-blue glass. Diam., 6 mm.

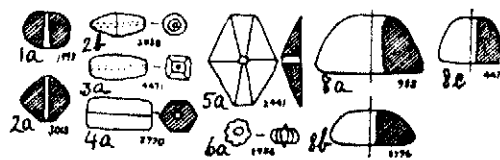
c. Reg. No. 2768, S4 c, Oct. 21, 1909. Dark blue. Diam., 10 mm.

2. Double cone-shaped beads.

a. Reg. No. 3013, S2 under portico pavement, June 23, 1910. Transparent greenish glass. L., 12 mm.; diam., 13 mm.

b. Reg. No. 3058, S2 under portico pavement, June 23, 1910. Translucent blue glass. L., 14 mm.; diam., 7 mm. See Pl. 83 a 6.

c. Reg. No. 2041, L. T. room 39, Sept. 9, 1909. Deep-blue glass. L., 6 mm.; diam., 5 mm.



245. Plain glass beads. Scale, 1:2.

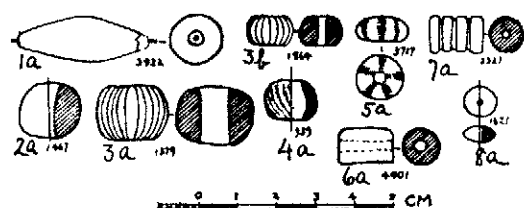
3. Four-sided long bead, swelling in middle.

a. Reg. No. 4471, S8 b, Sept. 12, 1910. Blue glass. L., 15 mm.; 7 mm. square.

4. Six-sided long bead, parallel sides.
  - a. Reg. No. 2770, S3 cistern in street, Oct. 12, 1909. Translucent pale blue glass. L., 17 mm.; 9 mm. in width.
  - b. Reg. No. 1368, Bas. cist. 1, July 21, 1909. Transparent green glass. L., 8.5 mm.; width, 4.5 mm.
5. Hexagonal flat bead, bottom flat, with six unequal faces on top, hole vertical through meeting-point of six faces.
  - a. Reg. No. 2441, S3 c W, Oct. 6, 1909. Deep-blue glass. L., 22 mm.; width, 17 mm.; height, 4 mm.
6. Ring-bead with serrated edge.
  - a. Reg. No. 2956, S. G. T. 7, June 22, 1910. Dark blue glass. H., 3 mm.; diam., 6 mm.
7. A series of ring-beads of dark brown (nearly black) glass were found in floor stratum (third) in the Basilica, and one of the same sort in H. S. 1, top dirt (Reg. No. 1816). The Basilica beads were mixed in black dirt with a large number of late Roman coins (200-350 A.D.). The Reg. Nos. are 1349, 1350 (2 beads), 1351 (34 beads), 1358, 1402, (3 beads), 1407. They vary in diameter from 4 mm. to 16 mm.
8. Whorls or buttons.
  - a. Reg. No. 988, Bas. 11 2d stratum, June 29, 1909. Translucent deep blue glass.
  - b. Reg. No. 2776, Gateway SW tower, Aug. 17, 1909 (below foot of City Wall). Translucent pale blue glass.
  - c. Reg. No. 4476, S8 a, Sept. 12, 1910. Translucent pale green glass.

## IV. Beads of colored Egyptian faience

1. Barrel-shaped beads, blue.
  - a. Reg. No. 3922, Kaid's Land a, Aug. 16, 1910. L., 21 mm.; diam., 12 mm.
2. Ball-beads, blue.
  - a. Reg. No. 1467, H. S. 1, June 15, 1909. Diam., 16 mm.
  - b. Reg. No. 2943, N. G. T. 5, June 22, 1910. Diam., 15 mm.
3. Ring-beads, with ribbed edge, blue.
  - a. Reg. No. 1379, Bas. cistern 1, July 20, 1909. H., 16 mm.; diam., 20 mm.
4. Ring-bead, with slanting ribs, blue.
  - a. Reg. No. 939, Bas. 2d stratum, June, 1909. H., 10 mm.; diam., 13 mm.
5. Ring-bead, with five black vertical bars.
  - a. Reg. No. 3717, S8 a, Aug. 3, 1910.
6. Cylindrical bead, blue.
  - a. Reg. No. 4901, S11 z deep, Oct. 19, 1910. L., 13.5 mm.; diam., 10 mm.
7. Cylindrical bead, with three incised bands around cylinder, blue.
  - a. Reg. No. 3321, S5 b, July 4, 1910. L., 14 mm.; diam., 9 mm.
8. Ring-beads, with ridge around middle, blue.
  - a. Reg. No. 1621, S2 north of Greek Fort Wall, Aug. 24, 1909. H., 5 mm.; diam., 11 mm.
  - b. Reg. No. 1703, S2-7 sub Roman, Oct. 25, 1909. H., 5 mm.; diam., 9 mm.
9. Irregular bead, blue.
  - a. Reg. No. 1875, L. T. 1 b, Aug. 18, 1909. L., 6 mm.
10. Bead, molded on each side like the open side of a cowrie-shell, yellow.
  - a. Reg. No. 4460, Samarra's Land b, Sept. 10, 1910.



246. Faience beads. Scale, 1:2.

## V. Stone beads

1. Barrel-shaped beads.
 

Carnelian:

  - a. Reg. No. 1820, H. S. 2, July 2, 1909. L., 20 mm.
  - b. Reg. No. 1822, H. S. 2, July 2, 1909. L., 16 mm.
  - c. Reg. No. 2006, L. T. 3 a, Sept. 3, 1909. L., 18 mm.
  - d. Reg. No. 2763, S2 between west walls of temple deep, Oct. 13, 1910.

Veined agate:

  - e. Reg. No. 3367, S5 b, July 7, 1910. L., 8 mm.
  - f. Reg. No. 1569, S2 S surface dirt, July, 1909. L., 30 mm. (originally 38 mm.). Bored from both ends.
  - g. Reg. No. 2045, L. T. 5 c, Sept. 9, 1909. L., 18 mm.

- h. Reg. No. 2592, S3 c, Oct. 22, 1909. L., 13 mm.  
 i. Reg. No. 3565, S6 e, July 21, 1910. L., 13 mm.  
 j. Reg. No. 4671, S10 b, Sept. 27, 1910. L., 17 mm.

## Quartz:

- k. Reg. No. 2195, S3 b street, Oct. 6, 1909. L., 20 mm.

## Black stone:

- l. Reg. No. 3930, S7 surface, Aug. 16, 1910. L., 27 mm. Shell (?).  
 m. Reg. No. 3736b, S4-356 sub, Aug. 4, 1910.

## 2. Ball-beads.

## White limestone:

- a. Reg. No. 3590, S6 f W, July 22, 1910. Diam., 17 mm. See Pl. 83 j 6.  
 b. Reg. No. 4489, S8-803, Sept. 13, 1910. Diam., 21 mm.

## 3. Ring-beads.

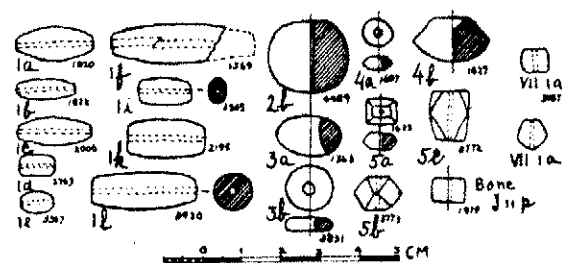
## Carnelian:

- a. Reg. No. 1363, Bas. 19, July 3, 1909. H., 12 mm.; diam., 17 mm.  
 b. Reg. No. 3831, S7-357 sub, Aug. 10, 1910. H., 3 mm.; diam., 1.3 mm.

## Hard dark stone:

- c. Reg. No. 1365, Bas. 18, July 3, 1909. H., 7 mm.; diam., 11 mm.  
 d. Reg. No. 1371, Bas. cistern 1, July 21, 1909. H., 11 mm.; diam., 14 mm.  
 e. Reg. No. 1392, Bas. cistern 1, July 20, 1909. H., 9 mm.; diam., 18 mm.

- f. Reg. No. 1406, Bas. room 9 below basis, Aug. 10, 1909. H., 9 mm.; diam., 23 mm.



247. Stone beads. Scale, 1:2.

## 4. Ring-beads with ridge around middle.

## Carnelian:

- a. Reg. No. 1607, S2-43, Aug. 17, 1909. H., 3 mm.; diam., 7.5 mm.  
 b. Reg. No. 1827, H. S. 1, July 12, 1909. H., 12 mm.; diam., 19 mm.  
 c. Reg. No. 2766, S3 c, Sept. 28, 1909. H., 6 mm.; diam., 12 mm.  
 d. Reg. No. 3061, S2-7 sub, June 25, 1910. H., 3 mm.; diam., 5 mm.

## 5. Beads with facets.

- a. Ten-facet carnelian bead, Reg. No. 1625, S2-7, Aug. 26, 1909. Square.  
 b. Ten-facet crystal bead, Reg. No. 3773, Kaid's Land b, Aug. 5, 1910. Square, 11 mm.  
 c. Fourteen-facet black stone bead, Reg. No. 3772, Kaid's Land b, Aug. 5, 1910. L., 14 mm.

## VI. Bone beads

See under Bone, Chapter X J, No. 11.

## VII. Coral (?) beads

- a. Reg. No. 3057, S2 apsidal building, June 25, 1910. See Pl. 83 a 7, 8 (two).



## CHAPTER XII

### SCULPTURE, FIGURINES, AND MISCELLANEOUS OBJECTS OF POTTERY

#### A. SCULPTURE

##### I. Early period

No pieces of sculpture of any sort were found which could be definitely assigned to either the Israelite or the Babylonio-Grecian period, not even architectural details. A single piece of hard, opaque, gray-black stone, carved in relief, was found in S1 (June 3, 1909; Reg. No. 1443), which possibly belongs to an early period. Pieces of the same material, made into thresholds or grindstones, were found in the Preherodian houses in the Lower Terrace, but no further confirmation of the early date was forthcoming.

##### II. Hellenistic Sculpture

A number of fragments of Hellenistic sculpture were found at various places in the debris of the Preherodian houses and at the Basilica. The chief pieces were a naked youthful figure in high relief, in marble, and a bronze figure of Hercules (1 and 7, below). Both of these are of good Hellenistic work, and go far to confirm the impression of prosperity produced by the other remains of the period.

1. Marble relief. Youthful naked figure, with a garment thrown over the left shoulder and falling down the left side. See Pl. 79 g.

Total height as preserved,	57 cm.
Height of neck,	4.5 cm.
Diameter of neck,	4.5 cm.
From neck to navel,	12 cm.
From navel to pelvic bar,	6.3 cm.
From pelvic bar to right patella,	15 cm.

The drapery is colored red, with a purple band along edge. The back is a flat slab roughly smoothed, with a lead dowel (between the shoulders of the figure) for fastening to the object which the relief adorned. There are also two holes through the drapery for metal pegs. The left arm was a separate piece of stone fastened to the figure with a lead dowel. This relief was probably attached to some building rather than to a sarcophagus. If to the latter, it must have been dragged to the site fortuitously.

- a. Reg. No. 4001, S8 806 NW angle of the room (which is Hellenistic in date), Aug. 20, 1910. The relief lay face down in dirt which had been thrown into the room in some leveling operation. On lifting the relief, a thick layer of color stuck to the cast in the mud, showing that the colors were comparatively well preserved when the relief was thrown down.

2. Lower part of a draped figure. Pl. 76 bb. A low basis with a square object (base of a pillar) in front. White marble. H., 16.2 cm.

- a. Reg. No. 2526, S3 d, Sept. 23, 1909.

3. Upper part of body of draped female figure with child on back of left shoulder. White marble. H., 9.3 cm.

- a. Reg. No. 3078, S2 portico in debris in Preherodian house, June 26, 1910. See Pl. 76 aa.

4. Hand of a figure holding a lute (?). Lute (?) colored red. White marble. L., 7.6 cm.  
a. Reg. No. 4448, S8 b, Sept. 9, 1910.
5. Arm of a figure. White marble. L., 16 cm.  
a. Reg. No. 1914, L. T. 1 b cistern 2, Aug. 23, 1909.
6. Foot of a figure, unfinished. Limestone. L., 20 cm.  
a. Reg. No. 1947, L. T. 1 b, Aug. 24, 1909.
7. Bronze statuette of Hercules. Pls. 77 and 78. Arms broken off. On bottom of feet two rings for attaching to a basis. H., 35.8 cm.; l. of rings, 2.6 cm. Hollow casting.  
a. Reg. No. 1418, Bas. cistern 4, July 30, 1909. The curb, or well, of the cistern had been carried away flush with the rock, and the cistern was so hard packed with yellow debris as to be visible on the rock surface only as a faint circle. The yellow debris contained potsherds of the Israelite period, but in no great abundance. On the floor was about 25 cm. of black silt. On this was about 30 cm. of silt mixed with yellow limestone debris. The limestone debris consisted apparently of natural chips from the roof and sides of the cistern which had fallen off while the well was dry, before it had been filled up. The sides were found by us in a bad condition, and the cistern was cleared with a certain amount of danger. In this mixed debris about 40 cm. above the floor was the bronze

statuette lying flat. The statuette was therefore thrown in after the cistern had fallen into disuse and before it had been filled with Israelite debris. No other fragments of the statuette were found. Not even potsherds were found in the lower debris. The packed yellow debris had evidently been taken from an Israelite deposit (masons' debris) and placed in the cistern to fill it in preparation for the construction of some large building, probably the Herodian Basilica. The bronze statuette came, no doubt, from the Hellenistic building represented by the dark blue walls under the Basilica (see Plan 12).

8. Arm of statuette, bent at elbow. L. wrist to elbow, 4 cm.; elbow to shoulder, 5.5 cm. Hollow cast.  
a. Reg. No. 1604, S2-43 sub, Aug. 17, 1909. About one metre under floor.
9. Small bronze statuette of a draped female figure, standing with left arm resting on a square pillar. Pl. 76 z. Pin on bottom for attachment to pedestal. Solid. H., 7 cm., including pin.  
a. Reg. No. 1899, L. T. 1 d room 2, with square pillar, Aug. 21, 1909.
10. Lead figure for magical purposes. Naked male figure with the right arm and right leg twisted off. See Pl. 76 y. H., 5.7 cm.  
a. Reg. No. 1951, L. T. 1 a, Aug. 17, 1909.

## B. FIGURINES

The figurines may be divided into crude figurines (Israelite and others) and Greek figurines. Three of the crude figurines (1 a, 2 b, 16 a, below) were found in the same layer of occupation debris in which the Israelite ostraca were found. The others were in mixed debris, which might contain Israelite, Babylonian, or Hellenistic objects. The figures are all probably Prehellenistic, judging from the materials and forms.

### I. Israelite and other crude figurines

1. Standing female figure (goddess), with tight embroidered robe falling to ankles. Solid black ware with red surface, red wash, pebble burnished on back and base.  
a. Reg. No. 3882 (lower part only), S4-418 occupation debris, Aug. 15, 1910.
2. Standing female figure, with tight-fitting robe, holding a tambourine on left arm, and beating it with right hand. Brown or black ware, according to baking, red wash, pebble-burnished on back.  
a. Reg. No. 4679 (legs missing), S8-840 sub, Sept. 28, 1910. See Pl. 75 a.  
b. Reg. No. 3960 (head and feet missing), S4-423 sub, Aug. 18, 1910.
3. Standing female figure, with hands under breasts, hair in two long braids hanging down on shoulder, clothed (?). Gray ware burned to red on surface.  
a. Reg. No. 4782 (legs missing), S2-67 sub, Oct. 8, 1910. See Pl. 75 b.  
b. Reg. No. 4897 (head and feet missing), S11 v under floor of north end of subt. corr., Oct. 18, 1910. See Pl. 75 c.  
c. Reg. No. 3318 (only the bust preserved), S5 b, July 4, 1910. This has traces of stucco. See Pl. 75 f.
4. Female figure like No. 3, on a plaque or bed. Coarse red ware, black core. Width, 7 cm.  
a. Reg. No. 2884, S2 II 7 sub, June 20, 1910. Head and neck only. See Pl. 75 d.

5. Well-made female figure (Hellenistic?), naked, hands under breasts, hair in two square plaits over shoulders. Buff paste, red surface.
  - a. Reg. No. 2189, S3 a W, Oct. 5, 1909. See Pl. 75 g.
6. Horse (?) and rider. Light red ware, well mixed.
  - a. Reg. No. 2968 (heads and legs missing), S. G. T. 3, June 23, 1910. In the same debris were many red-figured Greek potsherds and other fragments of similar date. See Pl. 75 j.
7. Horse's head with trappings. Light red ware, red wash, dull burnished.
  - a. Reg. No. 2449, S3-304, Oct. 7, 1909. See Pl. 75 m.
8. Horse's head and fore-quarters with trappings. Black paste, turning red on surface.
  - a. Reg. No. 2791, S3 above Greek Fort Wall, surface dirt, Oct. 13, 1909. See Pl. 75 r 1.
9. Horse's head with trappings. Drab ware, red wash.
  - a. Reg. No. 2612, S4 d, Oct. 25, 1909. See Pl. 75 r 3.
  - b. Reg. No. 2793, S3 above Greek Fort Wall, surface dirt (near No. 8), Oct. 17, 1909. See Pl. 75 r 2.
  - c. Reg. No. 2602, S3 b W, Oct. 25, 1909.
10. Horse's head, with trappings, hollow with small aperture through mouth (as if a spout). Drab ware.
  - a. Reg. No. 2603, S4 b W (mixed yellow and black debris), Oct. 25, 1909. See Pl. 75 r 4.
  - b. Reg. No. 2877, S. G. T. 2, June 20, 1910. Red-figured Greek ware in same debris.
11. Quadruped. Brown ware, black core, traces of white stucco.
  - a. Reg. No. 4065, S2-7 deep, Oct. 25, 1909.
12. Horse. Brown ware.
  - a. Reg. No. 4126, S10 c, Aug. 27, 1910. See Pl. 75 i.
13. Quadruped. Brown ware.
  - a. Reg. No. 4666, S8-880, Sept. 26, 1910. See Pl. 75 l 1.
14. Animal head. Drab ware, red colored bands.
  - a. Reg. No. 4620, S7 near cistern 5, Sept. 22, 1910. See Pl. 75 l 2.
15. Bull's head. Brown ware, burned red; red bands around eyes and to mark trappings.
  - a. Reg. No. 4823, S11-5, Oct. 11, 1910. See Pl. 75 h.
16. Bird, with black line pattern. Red ware, smoothed.
  - a. Reg. No. 3858, S4-406, Aug. 11, 1910. Pl. 75 c.

## II. The Greek Figurines

Some of these are solid, some hollow with solid head and extremities, and some hollow throughout. The clay is a fine paste, soft burned, and light red to gray-drab in color. Most of them bear traces of color, and one piece (No. 7 b) was gilded.

1. Standing male figure.
  - a. Reg. No. 2578 (legs and other fragments), S3 street cistern, Oct. 20, 1909. See Pl. 75 u.
  - b. Reg. No. 2466 (arm of a?), S3 a W, Oct. 8, 1909.
  - c. Reg. No. 2499 (fore-arm), L. T. 64, Oct. 11, 1909.
  - d. Reg. No. 4128 (arm), S10 e, Aug. 27, 1910.
  - e. Reg. No. 1996 (feet on a basis, colored red, black and white), L. T. 1 c, Sept. 2, 1909.
2. Hollow draped female figure, represented only from waist up.
  - a. Reg. No. 1814 (head missing, garment colored blue), H. S. 1 top stratum, June 21, 1909. See Pl. 76 h.
3. Hollow draped female figure, standing. Left arm hanging, right hand under breast.
  - a. Reg. No. 4918 (head missing, traces of red, blue and white), S11-11 sub, Oct. 21, 1910. See Pl. 76 l.
4. Solid female (?) figure with wavy hair falling each side of neck. Red paste. Behind is a conical projection pierced vertically.
  - a. Reg. No. 2429, L. T. 5 d (~100 cm.), Oct. 6, 1909. See Pl. 76 a.
5. Solid draped female figure, standing with feet together, on a basis. Legs and feet only.
  - a. Reg. No. 2993, N. G. T. 11, June 23, 1910. H., 5.8 cm.
6. Hollow draped female figure (fragments all). Fine reddish-brown paste.
  - a. Reg. No. 1943 (many fragments colored), L. T. 1 c, Aug. 26, 1909.
  - b. Reg. No. 2494, S3 street W, Oct. 9, 1909. See Pl. 76 k.
  - c. Reg. No. 3333, S5 a, July 5, 1910.
  - d. Reg. No. 3396, S5 h, July 6, 1910.
  - e. Reg. No. 4147, S7-702, Aug. 30, 1910. See Pl. 76 n.

- f. Reg. No. 4469, S7-755, Sept. 12, 1910.
- g. Reg. No. 4547, S8 d N deep, Sept. 17, 1910.
- h. Reg. No. 4548, S8 d N deep, Sept. 17, 1910.
- i. Reg. No. 4549, S8 o N deep, Sept. 17, 1910.
- j. Reg. No. 4603, S8-816, Sept. 21, 1910.
- k. Reg. No. 4741, S10 b, Oct. 1, 1910.
- l. Reg. No. 4766, S8 above Greek Fort Wall, Oct. 8, 1910.
- m. Reg. No. 4910, S11-11, Oct. 20, 1910.
- n. Reg. No. 4914 (hand leaning on a pedestal or box), S11-11, Oct. 20, 1910.
- o. Reg. No. 4915 (drapery over arm or leg), S11-11, Oct. 20, 1910.
- p. Reg. No. 4919, S11-11 sub, Oct. 21, 1910.
- q. Reg. No. 4934, S6 g, July 25, 1910.
- 7. Solid female head, from statuette.
  - a. Reg. No. 1988, L. T. 1 b room 12, Aug. 26, 1909. See Pl. 76 o, p.
  - b. Reg. No. 1990 (gilt crown), L. T. 1 cave 4, Sept. 1, 1909. See Pl. 76 i, j.
  - c. Reg. No. 4570, S8 d W beside Greek Fort Wall, deep, Sept. 19, 1910. See Pl. 76 b.
- 8. Solid female head with a conical cap.
  - a. Reg. No. 4573, S9 beside Greek Fort Wall, deep, Sept. 19, 1910. See Pl. 76 d.
- 9. Hollow female head, from statuette.
  - a. Reg. No. 3433 (cylindrical object on head, yellow), S5-361, July 12, 1910.
- 10. Hollow head, with knob (hair?) on top, from statuette.
  - a. Reg. No. 1962 (front part only), L. T. 4 d, Aug. 27, 1909. See Pl. 76 c.
- 11. Solid head of child, different types.
  - a. Reg. No. 2192 (with short hair), S3 dump of 1908, July 23, 1909. See Pl. 76 e.
  - b. Reg. No. 2792 (with flowing locks), Gateway SW tower, sub Roman, Aug. 17, 1909. See Pl. 76 f.
  - c. Reg. No. 2803 (with cap), Gateway N of Herodian wall, deep, Aug. 4, 1909. See Pl. 76 g.
- 12. Solid head of boy. The two examples are different.
  - a. Reg. No. 3887, S7-357, Aug. 15, 1910.
  - b. Reg. No. 3166, N. G. T. 4, June 29, 1910.
- 13. Goose standing beside a hollow figure (missing).
  - a. Reg. No. 4130, S10 d, Aug. 27, 1910. See Pl. 76 r.
- 14. Squatting nude female figure, hollow.
  - a. Reg. No. 4835 (head missing), S11-1 sub, Oct. 11, 1910. See Pl. 76 m.
- 15. Solid bearded male head with Phrygian cap.
  - a. Reg. No. 3252, S5 f, July 2, 1910. See Pl. 75 k.
- 16. Hollow figure, with bearded male head.
  - a. Reg. No. 3092 (head, right arm and shoulder), S. G. T. 4, June 24, 1910. See Pl. 75 n.
- 17. Fragment of a hollow figure, right shoulder and arm, holding a circular object.
  - a. Reg. No. 3375, S5 h E, July 8, 1910. See Pl. 75 q.
- 18. Right side of hollow draped figure, holding object in right hand against breast, dress brown with red bands.
  - a. Reg. No. 2178, S3 c W, Oct. 5, 1909. See Pl. 75 v 1.
- 19. Draped male figure on a horse, hollow.
  - a. Reg. No. 2096 (one side only; head of figure, fore part of horse, and hind part of horse missing). L. T. 4-46, Sept., 1910. See Pl. 75 v 2.
- 20. Leg of horse, well made.
  - a. Reg. No. 4626, S8-813, Sept. 22, 1910. See Pl. 75 p.
- 21. Boy playing harp.
  - a. Reg. No. 2465, S3 a W, Oct. 8, 1909. See Pl. 76 q.
- 22. Figure of bull, hollow.
  - a. Reg. No. 2790 (head), Gateway, June 9, 1909.
  - b. Reg. No. 4546 (hind-quarters), S8 d N deep, Sept. 1, 1910. See Pl. 75 t.
- 23. Head of boar, hollow.
  - a. Reg. No. 2068, L. T. 3 b, under calidarium, Sept. 14, 1909. See Pl. 75 o.
- 24. Head of a cock, solid. Gray paste, dull black slip.
  - a. Reg. No. 2558, S3 street cistern, Oct. 18, 1909. All the objects found in this cistern were previous to 150 B.C. See Pl. 75 s.

#### C. PARTS OF VESSELS

In addition to these figurines, a number of molded figures were found. These are parts of vessels, mostly handles.

##### I. Unglazed wares

- 1. Projecting handle, in the form of a male face, with moustache and long beard in four long curls. Brown ware, Seleucidan or earlier.
  - a. Reg. No. 4151, S10 g, Aug. 30, 1909.
  - b. Reg. No. 3398, S5 h W, July 9, 1910.
- 2. Broad projecting handle with face in relief, towards vessel. On l., the letter E; on r., M (K reversed). Red ware, Seleucidan (?).
  - a. Reg. No. 4868, S11 x, Oct. 15, 1910. See Pl. 76 x.

3. Part of a curved tube vessel (circular lamp?) in the form of a nude male figure. Fine red paste.
  - a. Reg. No. 2029, L. T. 5, Sept. 8, 1909. See Pl. 76 w.
4. Bird, head missing, probably part of curved tube vessel (circular lamp?). Fine red paste. On an upright hollow tube, connecting with small hole in back.
  - a. Reg. No. 3211, S5 b, July 1, 1910.

## II. Black-glazed wares

1. Projecting handle in form of an ox-head. Drab paste, dull black glaze.
  - a. Reg. No. 2442, S3-311, black debris, Oct. 5, 1909.
2. Loop-handle ending at upper attachment in a dolphin's head. Gray ware, dull black glaze.
  - a. Reg. No. 4571, S8 d N deep, Sept. 19, 1910. See Pl. 76 v.
3. Loop-handle, with angular bend, ending in animal head at upper attachment. Gray ware, dull black slip.
  - a. Reg. No. 3229, S5 b, July 1, 1910.
4. Figure of a naked boy. Was stuck the whole length backwards on the rim or the handle of a bowl. Gray ware, lustrous black glaze.
  - a. Reg. No. 2432, L. T. 63, Oct. 9, 1909. See Pl. 76 s.
5. Ornament like small ledge handle from side of a bowl. Red paste, lustrous black glaze.
  - a. Dis. No. 1523, L. T. 3 a (lower room 39), Sept. 8, 1909. See Pl. 73 j 7.

## III. Red-glazed wares

1. Loop-handle with human face at lower attachment. Buff ware, poor glaze.
  - a. Reg. No. 2498, S3 street E, Oct. 11, 1909. See Pl. 76 u.
2. Loop-handle with grotesque face on lower bend near attachment. Red sigillata.
  - a. Reg. No. 1346a, L. T. b, Aug. 24, 1909.
3. Handle, decorated with pattern of lines. Gray paste, red glaze.
  - a. Reg. No. 2524, S3-324, Oct. 12, 1909.
4. Ornament in relief, a mask from rim or side of a bowl. Red paste, worn red glaze.
  - a. Reg. No. 4742, S10 b, Oct. 1, 1910. See Pl. 76 t.
5. Face attached to fragment of a vessel. Drab paste, red glaze.
  - a. Reg. No. 2497, S3-320, Oct. 11, 1909.

## D. POTTERY DISCS

Five pottery discs were found, the purpose of which is not clear. One of these bore a lion's head in relief, while the other four seemed to have letters or symbols (see Pl. 68) in relief. The back was in all cases flat. It is difficult to see how they could have been used as stamps.

1. Disc, with lion's head on face, in relief.
  - a. Reg. No. 1636, S2-51 sub, Aug. 28, 1909. Diam., 10.7 cm.; thickness of disc, 1.6 cm. See Pl. 68 i.
  - b. Reg. No. 2581, S4 g S, Oct. 20, 1909. Diam., 9 cm.; thickness of disc, 1.4 cm.
2. Disc, with small boss in centre, the rim quartered by V and N in relief, placed alternately.
  - a. Reg. No. 1552, S2 III 55, July 14, 1909. Diam., 9.2 cm.; thickness of disc, 1.4 cm. See Pl. 68 c 3.
  3. Disc with small boss, with four lines radiating to a circle. Rim outside circle bears eight symbols or letters which I am unable to read.
    - a. Reg. No. 1776, vault cistern 2, Aug. 27, 1909. Diam., 9 cm.; thickness of disc, 1.6 cm. See Pl. 68 f.
    - b. Dis. No. 1178, S11 N, Oct. 17, 1910. Fragment.

APPENDIX  
PROGRESS OF THE EXCAVATIONS

BY  
GEORGE ANDREW REISNER

---

INDEXES

## PROGRESS OF THE EXCAVATIONS

### A. DIARY

1909.

April 8-20. At Harvard Camp at Pyramids near Cairo, preparing supplies, equipment, and stores.

April 13. Clarence S. Fisher arrived in Cairo from America.

April 15-26. Reactionary revolution in Constantinople delayed the departure for Palestine.

May 3. Left Cairo *via* Port Sa'ïd with family, Mr. Fisher, and 33 Egyptian workmen.

May 4. Landed at Jaffa, paying duty on stores, but, by courtesy of Director of Customs, not on equipment.

May 7. Arrived with whole party at Sebastaste and established a camp of tents on the western slope below the summit.

May 8-28. Appointment of a commissioner was delayed by the events in Constantinople. On the 28th, Mohammed Sa'ïd Effendi of Nablus, having brought a written order from the Mutesarrif, I arranged to begin work on Monday, May 31.

May 31. Work began on S1 along Trench H (1908) with 62 local work-people. Commissioner arrived with an order from the Wali in Beirut to begin.

June 1. Work-people increased to 140, divided into two companies, one in S1 and the other at the north end of the Basilica.

June 4. Shawket Effendi el-Khalidi of Jerusalem arrived with an order from Hamdy Bey, and took over the inspectorship from Mohammed Sa'ïd Effendi.

June 2-9. The body of local work-people was increased gradually to 250, and remained at about this number throughout the season. They were divided into nine large gangs, four at the Basilica and five in S1.

June 9. Work was opened at the Gateway with two gangs drawn from the force working on S1.

June 17. S1 being ready for final careful examination and recording, put the three gangs in a trench called H. S., a continuation southwards of Trench H (1908), intended to cut open the whole southern slope (see L. T., Cl. T., and Roadway—never finished beyond Road of Columns).

July 2. S1 finished, except foundation of Israelite wall in S1 IV 8 and cistern 7. Work on S2 began with two gangs from H. S., leaving one gang on H. S. 2, two on the Gateway, and four on the Basilica.

July 9. Stopped work at Gateway and brought the two gangs to S2. The shifting of the gangs was determined entirely by the necessities of the summit work.

July 10. S1 entirely finished. Work went on in S2, the earth being thrown over S1.

July 17. Two gangs shifted from Basilica to S2, leaving two gangs on final clearing at the Basilica. Six gangs on S2 and one on H. S. 2.

July 26. Sent half a gang from Basilica and two gangs from S2 to renew work on Gateway.

July 28. Sent three gangs from S2 to open Roadway Trench across Road of Columns in a line with H. S. Thus there were one and a half gangs on Basilica, two and a half on Gateway, and two on S2.

Aug. 2. Owing to the exigencies of the records, six gangs were laid off. The remaining three were kept on Roadway Trench, as the plan was formed of attacking the terrace (Lower Terrace) south of S2 from below (south).

Aug. 3. Half a gang on R. T., half a gang on S2, a gang on Gateway, and a gang started on Cliff Trench.

Aug. 5. Three gangs laid off and six taken on,—half a gang on Basilica, one on S2, two on R. T. and Cl. T., and two and a half on Gateway. Built movable wooden tripod four metres high for taking photographs.

- Aug. 9. All gangs on again,—one on Cl. T., one on S2, four on Basilica, and three on Gateway.
- Aug. 11. One gang shifted from Basilica to Gateway, and two from Basilica to L. T. Lower Terrace started with four gangs, leaving one at Basilica and four at Gateway.
- Aug. 19. All gangs on summit,—half a gang on vault (1908) cistern 2, two and a half on S2, and six on L. T.
- Sept. 3. Half a gang finished vault (1908) and began cutting 10 metre section along west side of pavement (1908).
- Sept. 10. Work being crowded in L. T., sent two gangs to Gateway to clear present-day road of our debris, leaving half gang on pavement (1908), half gang on old dump in S3, and 6 gangs on L. T.  
In accordance with instructions from Prof. Lyon, arranged to leave S2 open.
- Sept. 15. Three gangs on S3 (old dump), two on Gateway, and three on L. T.
- Sept. 16. Four gangs on S3 (old dump), two on Gateway, and three on L. T.
- Sept. 18. Five gangs on S3, cultivation stratum, two on Gateway, one on S2, and one on L. T.
- Sept. 22. Work on Gateway stopped. Seven gangs on S3, one on S2, and one on L. T. 5.
- Oct. 6. Work started on old dump in S4.
- Oct. 14–16. No work. Feast of end of Ramadan.
- Oct. 19. L. T. finished. Work begun on S4, cultivation stratum, with seven gangs, leaving two gangs for odd jobs in S3 and S2.
- Oct. 23. S3 finished.
- Oct. 27. Work stopped by rain until Nov. 1st.
- Nov. 3. Last pay day.
- Nov. 4–13. Engaged in photography, registration, and packing, constantly delayed and interrupted by rain.
- Nov. 14. Left for Jaffa.
- Nov. 15. Embarked for Port Sa'id.
- Nov. 16. Arrived at Pyramids.
- 1910.
- May 18. *Irada* issued, renewing our permission to dig at Samaria for one year.
- May 24. Shipped greater part of stores and equipment.
- May 26. Thirty-six Egyptians arrived in Cairo, and immediately sent to get Egyptian passports. The time until May 30th was occupied with the wearisome task of securing passports.
- May 30. Permit not yet received from Constantinople. Mr. Fisher with his family and 15 Egyptians left for Jaffa.
- June 5. Although permit had not arrived, I left with my family, Mr. Oric Bates, and 19 Egyptians for Jaffa, leaving Said Ahmed and Sadîq Sa'id to wait for the permit and bring it on.
- June 9. Reached Sebaste about 10 A.M. Engaged a new camping ground, and set the men to clearing the ground and putting up the tents.
- June 10. Established Camp. Shawket Effendi, the Commissioner, arrived with his family.
- June 14. Said Ahmed arrived at daylight from Jaffa, having traveled all night. He brought the *irade*. At noon Shawket rode to Nablus with the *irade* to have it registered.
- June 15. Excavations started soon after sunrise with the 250 local workmen used last year, divided into the same 9 companies, each under three Egyptians. Everyone fell into line, and the work began without a hitch, as if we had left off yesterday. Clearing earlier walls north of the Gateway, called North Gate Terrace (N. G. T.)
- June 17. Work on N. G. T. Started excavation of south tower (South Gate Terrace). Started removing Roman walls in Summit strip 2 south end.
- June 18. Mr. Bates found in a field on the southern side of the hill a potsherd with Hebrew letters scratched on it (see Pl. 55 a).
- June 21. Started removing pavement of Severan temple in S2.
- June 23. Telegram from Director of Museum, Constantinople, to Shawket Effendi, ordering him to turn works over to a new commissioner.
- June 24. The Mutesarrif attended by two soldiers arrived unannounced before 7 A.M. He was on his way to Jenin. Took breakfast with us, saw the finds, examined system of registration, looked



- over the excavations, and discussed the actions of the sheikhs with some indignation. This inspection took longer than anticipated, and the Mutesarrif did not get away until after tea, when he rode on to Jenîn.
- June 26. Shawket Effendi and Mahmud el Meyyit attended an investigation of the *Miglis el-Idâra* at Nablus into our payments for land. This vexatious proceeding was promptly stopped by the Mutesarrif on his return, as a result of his own inspection of our receipts; and we heard nothing more about it.
- June 27. Work on S2, S. G. T., and N. G. T. Started removing old dump heap (1908) from S5.
- June 28. Work as yesterday. At sunset Mohammed Sa'id Effendi of Nablus, former commissioner, arrived with an order from Museum Director to take over the work from Shawket Effendi.
- June 29. Shawket Effendi, Mohammed Sa'id Effendi, and I prepared an Arabic translation of our register of objects found up to yesterday (Nos. 2811-3108) in three copies, each signed by all of us. Having finished the clearing away of Roman walls in S2 south, the examination of N. G. T., and the removal of the old dump on S5, work was concentrated on S. G. T. and on S5. In S5 we began clearing away surface debris.
- June 30. Shawket Effendi and family left at daybreak for Jerusalem.
- June 30 to July 2. One gang on S. G. T., rest on summit. Began work clearing away later Roman walls in S4.
- July 4. S5, clearing away upper debris in blocks e to f. S4, working out details of Herodian house.
- July 6. S5 a-b finished to rock. S5 c-d and e-f still in hand. Two gangs were engaged in clearing at Gateway for final examination. Laid out work in field east of the Lower Terrace and called it Lower Terrace East (L. T. E.).
- July 7. Strip 5 c-d finished to rock at sunset. In S5 e, difficulty was offered by a manifest reconstruction of the SW bastion of the Greek Fort Wall, which was to cause us considerable delay. In S2 finished clearing away the late tower, revealing the underlying angle of the Omri palace.
- July 11. Whole force on S5 e-h, S7, and L. T. E. Began filling in S5 a-d and S3 with old dump from S7.
- July 13. Clearing away Herodian house in S4. Work on L. T. E.
- July 14. As work in S5 e-h was held up by the examination of the SW bastion of the Greek Fort Wall, I opened S6 in front of the Herodian temple. Work on L. T. E.
- July 15-19. Removing Roman walls in S5 e-f. Work on L. T. E. and S6 (surface debris).
- July 20. One gang on S5 e, one on L. T. E., and rest on S6.
- July 28. Went on clearing away Roman walls in S4. Found a pocket of 22 bronze city coins (Tyrian) and a silver coin of Antiochus VII. Owing to lack of room, laid off five gangs for three days, and utilized the extra Egyptians for special clearing work in S4 and S5 e.
- July 30. Work on S4, S5 e, and S6. L. T. E. finished. At noon laid off three gangs.
- Aug. 1. Laid off last three gangs at noon and took on first five laid off on Thursday. At noon started work with two gangs on a piece of land near the mosque donated by Sheikh Kaid (Kaid's Land), but was stopped by commissioner, who telegraphed to Museum. S5 finished. Began filling in S5. S4, clearing floor of rooms, known later as Ostraca House. Began on upper debris on S7.
- Aug. 4. Resumed work on Kaid's Land.
- Aug. 6. S4, house (Ostraca House) cleared to floor. S7, Severan house, cleared. S8 a-c cleared to first floor; S8 d and e started.
- Aug. 8. Removing Severan walls in S7. Continued work in N end of S6, dumping on south end of same. Started S8 f-g, to bring S8 down to level of S7.
- Aug. 10. Again laid off 5 gangs, owing to lack of dumping place. S7, clearing Herodian house. S4, started cutting out floor of house (Ostraca House).
- Aug. 11. Found the first Israelite ostrakon (Reg. No. 3855) in Room No. 401.
- Aug. 13. At noon laid off three gangs and took on the six gangs laid off on Aug. 9.
- Aug. 15. Work on S6 and S7.
- Aug. 16. Work on S6 and S7. In S6 retaining wall broke, but no one was hurt.

- Aug. 17. S4-335, cleared out construction trench of Greek Fort Wall. Contained nothing later than the Israelite period. Then carried out adjacent strata which underlay floor of Ostraca House. Arrived at the conclusion that Ostraca House was Israelite. Work on S6 and S7.
- Aug. 18. S6, discovered the cemented floor of a large basin on rock, an artificial pool. S4, cleared to rock. Began filling S4 from S7.  
S7, clearing away floors of Herodian house.  
Work still going on in Kaid's Land.
- Aug. 20. In the western part of S7 came on the mouth of a great cave filled with Israelite debris.
- Aug. 22. After long negotiation, received permission to excavate courtyard of Samarra's house. This had been opened by a European dealer some years ago; two sarcophagi with reliefs had been seen; figures had been sawed out and sold; the government had heard of the affair and stopped the work. Reached the sarcophagi about 4 P.M. Started clearing old dump (1908) from S9 and S10.
- Aug. 23. Finished excavation of Roman tomb in Samarra's house as far as possible without bringing down the house. Sarcophagi are poor local work of about the 3d Century A.D.—probably Roman soldiers of the Severan colony.  
Work on S7, S9, S10, and Kaid's Land.
- Aug. 27. Work as before. Filling in Roman tomb in Samarra's house. The sarcophagi were left in place on account of their small value and the great cost of moving them.
- Aug. 29. Work as on August 27. At noon laid off three gangs. Mohammed Yasîn offered us land belonging to Samarra on S slope for excavation free, as they intend to build there, and wish the site cleared.
- Sept. 1. Laid off three gangs at noon. Stopped work on S9. Working on S7, S8, S10.
- Sept. 2. Mr. Bates left for Cairo, to resume his work with the Nubian Archaeological Survey.  
Work on S7, S8, S10. Started work on Samarra's Land.
- Sept. 5. Work on S7 (cave), S8, S9, S10, and on Samarra's Land. About four o'clock the retaining wall in front of temple stairway broke, and two local workmen were hurt. One was sent to the hospital in Nablus for ten days.  
The first day of the Ramadan fast.
- Sept. 6. Stopped work on Samarra's Land at noon. Work on S7 (cave), S8, S9, and S10. Laid off whole Moslem force (locals).
- Sept. 7. Worked on S7 (cave) with the Egyptians and about 35 Christians.
- Sept. 8. Work resumed with full force. Work on S7 (cave), S8, S9, and Samarra's Land.
- Sept. 14. Finished the cave in S7.
- Sept. 15. Work on S8 and S9. Finished Kaid's Land and Samarra's Land.
- Sept. 16. Work on S7 (east end), S8, S9, S10. Clearing away Greek Fort Wall in S2 south, to reveal Israelite masonry.
- Sept. 17. Work as yesterday. S9 finished; began dumping into S9 east.
- Sept. 19. Work on S7, S8, S10. In S7 have revealed the continuation of the western face of the Ahab palace, and cleared the floor of the eastern side of the courtyard.
- Sept. 20. S8, clearing away floors of Greek houses. S2, clearing away rough Severan foundations in vestibule of temple, and removing foundation of Herodian stair, to reveal Preherodian houses underneath.
- Sept. 21. Work on S7, S2, and S8. Started clearing the last of the old dump of 1908 from S11.
- Sept. 22. Work as yesterday. In S9, cutting sections in Roman corridor wall.
- Sept. 23. At noon laid off three gangs.
- Sept. 24. Laid off three more gangs. Work confined to S8.
- Sept. 26. Work on S8 west, S9, and S10. Clearing away Roman wall in S7-772. Found two ostraca in the usual surface debris, Reg. Nos. 4660, 4661. These were the last ostraca which we found.
- Sept. 27. Work with six gangs in S8 (west), S2, and S10. In S2 cleared out Israelite debris under vestibule of Herodian temple. No ostraca were found inside the Ahab palace.
- Sept. 28. Work as yesterday. In S2 under pavement, the Preherodian street with shops now clear to floor.

- Sept. 30. S2, clearing away Preherodian floors.  
Work on S8 and S10. Began on top debris of S11.
- Oct. 1. Work on S2, S8, S10, S11.
- Oct. 2. Paid off 12 Egyptians and sent them to Jaffa *en route* for Egypt, to join the Nubian Archæological Survey (in charge of Mr. C. M. Firth).
- Oct. 3. Rain in the night. As it was still raining at daybreak, did not start the gangs. Showers fell at intervals all morning. Decided to finish about Oct. 24th, to avoid the weather difficulties experienced last year.
- Oct. 4. Last day of Ramadan.
- Oct. 5. Feast of Beiram.
- Oct. 6. Reorganized the gangs, on account of the departure of the 12 Egyptians, and arranged to work only six gangs at a time in three day shifts.  
Work on S2, S8, S10, S11.
- Oct. 7. S8 finished at last.
- Oct. 8. Work on S10, S11, and S2.
- Oct. 10. Work on S11.
- Oct. 11. Work on S11 and on subterranean corridor.
- Oct. 12. Work as yesterday. Began leveling covered parts of summit, also the land about Trench E. Have resolved to leave temple on summit, Gateway and Basilica open, according to an agreement with the Mutesarrif.
- Oct. 13-21. Work on S11. Leveling continued.
- Oct. 22. Began filling in S11 from the debris above S6 and S9. Work on S11 north still going on.
- Oct. 24. The summit inside the Greek Fort Wall was finished to-day and the filling of S11 was continued.
- Oct. 25. Finished filling in S11, and all local work-people were laid off at noon. Started final photography and packing.
- Oct. 26. All registers finished to date. Photography and packing went on until Nov. 5th.
- Oct. 29. Employed three gangs all day, putting the public highway through the Gateway in order.
- Oct. 31. Rained to-day.
- Nov. 1. Rained in the night and for two hours this morning.
- Nov. 2. Egyptians began enclosing the temple on the summit, the Gateway and the Basilica with a barbed wire fence, according to agreement with the Mutesarrif.
- Nov. 3. Used three gangs all day putting Basilica excavations in order. Wire fences finished. Fisher and I marked out the old land boundaries in the presence of the landowners. Fisher left about 4 P.M. for Nablus on his way to Egypt.
- Nov. 4. Last pay-day. Paid off immediately after lunch. The women and girls were given candies and fire-crackers as they left the table. The men and boys were invited to a great feast. The village sheikhs were invited to dinner with me.
- Nov. 5. Finished packing, and despatched loaded camels to Jaffa to Mr. Breish. I left with my family after dark for the Hamburg-American Hotel in Nablus; but the Egyptians remained under Said Ahmed to clear the camp.
- Nov. 6. Twelve of the Egyptians arrived at sunrise at Nablus and went on to Jerusalem on a pilgrimage. Camels were arriving all day with the wood and other material too heavy to transport to Egypt. The Hamburg-American Company through its agent, Mr. Heselschwert, very kindly stored this stuff for us.
- Nov. 7. Said Ahmed arrived with the remaining nine Egyptians. Eight of them were sent off to Jaffa for Egypt. The antiquities were sent under the personal supervision of Sa'id Effendi to Jaffa, where he superintended their despatch to Constantinople. In the absence of the Mutesarrif, called on the Acting Mutesarrif.
- Nov. 8. As the Mutesarrif was still absent at Tûl-Karem, I delivered the deeds for the land and the keys of the barbed wire enclosure to his representative, and was given an official receipt therefor.
- Nov. 9. Left with my family.
- Nov. 14. Arrived at the Pyramid Camp, where the Fishers had been settled for a week. Worked on registers, maps, etc., until Dec. 16.
- Dec. 16. Left for Constantinople, going alone.

Dec. 20, 21, 22. Showed Khalil Bey, Director of the Museum, our registers, maps, and photographs. Explained methods of work. Re-examined some of the antiquities sent in 1909 to the Museum. The Museum at Constantinople has been en-

riched by nearly five thousand objects from Samaria. Our hope that some of the objects found might be allowed to go to the Harvard Semitic Museum was not realized.

## B. EXCAVATION OF THE SEVERAL SECTIONS

### I. SUMMIT STRIP 1, 1909

May 31-June 1. Cleared to mosaic floor. Surface debris mostly, due to agricultural leveling. Objects from Greek to Byzantine periods.

June 2-4. Cleared to floor of bath basins. Debris of decay.

June 5-7. Carrying out debris in penetrations of bath-house level. Large hole (stone-thieves' work), south of bath, filled with dumped debris containing mostly Greek and Hellenistic objects. See Pl. 2 a.

June 8-10. Carrying out bath-house floors and clearing away underlying debris to surface of packed yellow Israelite debris.

June 11-15. Uncovered Israelite walls in yellow debris.

June 16-21. Clearing cistern 8. Hellenistic and Greek objects.

June 16-30. Cleared away Israelite debris to rock. Photographs and plans were made. See Pls. 2 b; 3 a, b; 4 a-d.

July 1-9. Clearing cisterns 1, 2, 3, 4, 5, 6, 7, 9. Cistern 7, never used as a cistern, contains objects of 7th to 4th Century B.C., including Aramaic jar inscriptions.

### II. SUMMIT STRIP 2, 1909-1910

1909.

Summit strip 2 (S2) covered the temple. The excavations of 1909 began at the trench which laid bare the southern side of the stairway in 1908. The upper or cultivation layer merged into the earth with which the houses were filled. The whole stratum down to the first floor was taken out in 5-metre sections. These sections were divided into three groups, north, middle and south. In the northern group, as the house walls were immediately visible, all objects were, from the beginning, registered under the room numbers. The upper stratum over the middle and southern portions was a homogeneous agricultural deposit; and

the objects found in it were entered as from S2 middle or S2 south. Below this stratum, the objects were entered with reference to the underlying walls.

July 2-19. North end cleared to floor of latest Preherodian houses. Penetrations of Herodian and Roman periods also cleared. In the debris above the floors, objects of all periods from the Post-Israelite to the Byzantine were found, including Ptolemaic, Seleucidan, Herodian, and Roman coins. On the south, the ground falls away below level of house floors, and here only the dump heap of 1908 has been removed. All debris was deposited on S1. See Pls. 6 a, b, c; 5 a.

July 20-24. Floors of Preherodian houses, and penetrations in middle part of strip. Upper debris over southern part of S2. As usual, objects of all periods (Ptolemaic coins, Reg. Nos. 1580, 1579).

July 25-31. Clearing structure with apse in southern part of S2. See Pl. 7 b, taken Aug. 25, but showing this stage.

Aug. 1-15. Photography and plans. During this time, odd points were cleared for examination.

Aug. 16-31. Clearing away floors and underlying blocks of debris of Preherodian houses. See Pls. 6 d (Aug. 19); 9 a (Aug. 23). Under these floors, no objects of the Herodian or later periods were found. The black earth contained Hellenistic objects including Ptolemaic, Seleucidan, and autonomous city coins. In the dirty yellow debris, formed of Hellenistic and Israelite deposits mixed by the removal of building-stones, the objects in the lower levels were mainly Israelite (glass paste, pieces of ivory, and potsherds).

Sept. 1-4. Clearing to floors of Israelite rooms or to rock in S2 north and middle. See Pl. 8 a.

Sept. 5-23. Photographs and plans. From Sept. 18 one gang was employed clearing odd points as required.

Sept. 24 to Oct. 25. Clearing structure with apse to lowest level, leaving main walls standing on debris. See Pls. 7 c (Oct. 8); 5 b (Oct. 14); 7 a (Oct. 14). In the upper debris, objects of all periods. In the black debris, Greek and Hellenistic objects (red-figured potsherds), but no objects of the Herodian or later periods. In the yellow debris, Israelite potsherds, an iron arrow-head (Reg. No. 1702), a blue-glazed bead (Reg. No. 1703), a faience amulet (Egyptian), and a pottery figure.

Oct. 4-7. Clearing away Preherodian house walls, to expose Israelite rooms 11-12 and the entrance to S1 cist. 7. Pl. 8 b, c, d (b, c taken June 21, 1910).

Oct. 8-13. Removing inner west wall of Severan temple, to reveal Herodian foundations and Israelite walls. Pl. 11 a (Nov. 2, 1910). Under the Severan wall, a Ptolemaic coin (Reg. No. 1698).

Oct. 25. Cleared out dirt floor of Israelite room 14. Israelite iron arrow-heads (Reg. Nos. 1700, 1701).

1910.

June 16-July 28. Cleared away all Roman walls in structure with apse, except great enclosing wall, to reveal Israelite masonry. Black debris of 7th to 4th Century, yellow Israelite debris below. See Pls. 9 b, c; 11 b.

June 25-30. Making cut in body-filling of Greek Fort Wall, hoping to find objects which would determine date, but in vain. See Pl. 11 b.

June 30-July 7. Removing Arab (?) square tower, in order to reveal SW corner of Omri palace. See Pl. 10 a.

June 21-27. Preherodian house, rooms 32 and 33 cleared to packed Israelite debris. See Pl. 10 c.

Sept. 20-27. Cleared away rough foundations of the pilasters of the Severan vestibule.

Sept. 27-28. Cleared away packed Israelite debris under vestibule and Preherodian rooms 32 and 33. See Pl. 10 d.

### III. SUMMIT STRIP 2, PAVEMENT OF TEMPLE PORTICO, 1909-1910

1909.

Sept. 5-6. Removing a strip of pavement ten metres wide in the west. In debris

of decay under pavement a coin of Nero. See Pls. 17 b (Aug. 11); 18 c (Sept. 7).

Sept. 7-10. Clearing floor of Preherodian room 63-64. See Pl. 54 a.

Sept. 11-25. Clearing debris under floor of Preherodian room 63-64.

1910.

June 21-27. Cleared away rest of pavement, leaving Herodian stair foundation on debris and descending to house floor. See Pl. 19 a (taken Sept. 19).

June 28-29. Cleared away Herodian stair foundation and underlying debris to street floor. See Pl. 20 a.

June 29-Oct. 5. Cleared away debris under floor of Preherodian street to rock. Only a light layer of yellow debris on rock.

Oct. 6-7. Cleared away debris under floors of Preherodian rooms 65-70. See Pl. 20 b.

Oct. 8. Cleared tunnel cistern belonging to room 54 or 55 (cavity under street).

### IV. TEMPLE VAULT, 1909

Was cleared to a floor in 1908. This floor was approached by a stair, a late reconstruction. Halter-bars had been cut in the walls and the vault used as a stable in Byzantine-Arab times. Cistern 1 had been partially cleared. See Pls. 22 a, b; 24 b.

Aug. 16-17. Cleared away late floor (see Pl. 22 c) and then a second hard floor, revealing Preherodian (Greek?) walls, Israelite rock-dressing, and cistern 2. See Pls. 22 d; 23 a.

Aug. 17-28. Clearing cistern 2. Dirt very wet; allowed to dry.

Aug. 29-Sept. 1. Sifting dirt from cistern 2.

Sept. 2-3. Clearing cistern 1. Later sifted dirt as that of cistern 2.

### V. TRENCH H. SOUTH, 1909

Trench H. South (H. S.) was intended to cut open southern slope of hill. For continuation, see Lower Terrace (L. T.), Cliff Trench (Cl. T.), and Roadway Trench (R. T.). Six 5-metre sections from edge of S1 southwards were numbered 1 to 6. The northern end of the trench was started with one gang on June 15, cutting through the slope bounding S1.

H. S. 1-3. June 17-27. Clearing away surface debris, came on a great hole made by stone-thieves, possibly in comparatively modern times, and refilled with black debris.

H. S. 1-5. June 28-July 7. Clearing away black debris, revealing broken edges of massive walls (Greek Fort Wall and walls of structure with apse) and blocks of yellow debris.

H. S. 1-3. July 8. Clearing into vertical stratum of debris (construction trench) between block of yellow debris and face of Greek Fort Wall, found fragment of cuneiform tablet (Reg. No. 1825) and Israelite potsherds. This vertical stratum is not to be confounded with black filling of thieves' hole.

H. S. 1-3. July 9-22. Cleared away all black filling of thieves' hole, finding great variety of objects, mostly of Hellenistic period.

H. S. 1-3. July 23. Cleared away yellow blocks, finding only Israelite potsherds. See Pls. 5 b (edge of excavation at bottom); 7 b (edge of excavation on right).

H. S. 4-6. The southern end of trench H. S. was finished as part of the lower terrace (L. T. 4 and 5).

#### VI. ROADWAY TRENCH, 1909

July 27-28. Clearing a strip 5 metres wide from edge of cliff under Lower Terrace to modern roadway. This cuts across the famous Herodian street of columns. Arab walls, Roman glass, lamps, and coins were found.

July 29-Aug. 2. Cleared to surface of Street of Columns (see Pl. 46 b). Mixed debris, some of it with Greek and Hellenistic objects, no doubt from the Lower Terrace and summit, and also late Roman coins.

Aug. 3-5. Cut through floor to rock (see Pl. 46 c). Hellenistic potsherds. In the floor debris 20 late Roman coins (Reg. Nos. 2622-2641).

Aug. 6-7. Cleared out mass of stones from semicircular room on north. Apparently a doorway through end of wall.

Aug. 8-10. Cleared through apparent doorway to rock behind. No cave or other room. Perhaps doorway was a niche, or some later attempt at a reconstruction.

Aug. 10. On Aug. 10, observing the tops of bases of columns in the modern road, about half way between R. T. and Gateway, I had a few men hastily expose the floor of the Street of Columns around them and re-cover the excavation, the whole being the work of a couple of hours. See Pl. 46 d.

#### VII. CLIFF TRENCH, 1909

Aug. 3-4. Began a continuation of Roadway Trench up the cliff to Lower Terrace.

Aug. 10-11. Finished Cl. T. to L. T. Layer of earth 50-120 cm. thick on a steep, uneven rock slope. Contained only ten registered objects, chiefly of the Hellenistic period but including one Roman coin (2d Cent. A.D., Reg. No. 2619).

#### VIII. LOWER TERRACE, 1909

Divided L. T. into five narrow strips running E and W, numbered 1 to 5 from the south. Each of these was divided into four working sections, lettered a to d, beginning on the west.

Aug. 11. Started work on L. T. 1 a-d, shooting the earth down the Cl. T. into the R. T.

Aug. 12-16. Cleared away nearly 2 m. of agricultural terrace debris, finding only a fragment of a late (Arab?) wall. In this debris, objects from Greek to Roman periods (see Reg. Nos. 1857-1865). In the NE corner of c, cistern 1.

Aug. 17. Walls appeared, embedded in same black debris.

Aug. 18. Rock scarp revealed in a-b and cave 1, covered with same black debris.

Aug. 18-21. Clearing cave 1. See Pl. 13 a, b. Objects not later than 2d Century B.C. Revealed upper rock-scarp all along a-d, caves 2 to 4. It was clear that the cliff edge was further out; and we began cutting out the slope southwards, along a to d.

Aug. 21-28. Clearing d section of strips 2-5 to end of old H. S. trench. Clearing to Roman floor (coins). See Pl. 14 b and d.

Aug. 22-Sept. 2. Cleared slope, caves, and rooms 1-15 in L. T. 1 a-c. See Pl. 12 a (Aug. 31). See the coins, Reg. Nos. 1909, 1921-6, 1981-5. Inside cave No. 1, there were two benches built of stones and

filled with earth. In the filling, three dated coins were found, one of Antiochus IV (Reg. No. 1983), one of Demetrius II (Reg. No. 1921), and one of Antiochus VII (Reg. No. 1982). In the debris which had come in through the mouth of the cave, there were five legible coins, bearing the names of Antiochus III (Reg. No. 1925), Antiochus IV (Reg. No. 1909), Demetrius II (Reg. No. 1924), Alexander II (Reg. No. 1886), and Ptolemais-Ake (2d Cent. B.C., Reg. No. 1926). Opened L. T. 2 a-c, dumping on L. T. 1 a-b. Continued work on L. T. 1 d. The debris was Greek and Hellenistic.

Sept. 3-7. Cleared Israelite wall on edge of cliff in L. T. 1 d. See Pl. 13 d.

Sept. 2-9. Cleared L. T. 2 a-c. This strip was bounded on the north by a wall,—edge of a building terrace. No floors were found except the rubble pavement. See Pl. 13 c. Under the black debris was a thin layer of coals and ashes on a well-laid rubble pavement. An obscure wall of large yellow stones (see Plan 2 F 18) rested on rock, under rubble pavement. Rock showed quarry marks. See Pl. 15 b, c.

Sept. 6-9. L. T. 3 a-c. Cleared from 1st to 2d wall of Roman terraces. Three floors, (1) calidarium (Roman, see Pl. 14 a), (2) room 39, Preherodian floor, (3) rubble pavement under all, covered with same layer of burnt material. See Pl. 12 b. Quarry marks on rock.

Sept. 9-14. L. T. 3 a-c. Cleared away calidarium and Preherodian room 39. See Pl. 12 b (Sept. 13). Underneath the latter, a cemented basin, built on ash stratum. In the debris in the basin, the next to the earliest coin was found, that of Alexander the Great (Reg. No. 2052, 336-323 B.C.). Under calidarium (in c), no walls between calidarium, floor and rubble pavement. Debris is curiously disturbed, probably by stone plundering. Objects Hellenistic. Under whole extent of 3 a-c lies the rubble pavement, broken by a wall running N. Pavement laid up to both faces of this wall 60 cm. higher on east than on west of wall. See Pl. 15 a (Sept. 17) and Fig. 74.

Sept. 14-20. L. T. 4-5 a-c. Combined strips 4 and 5 into one. Carried out debris down to street floor and to floor of Pre-

herodian house. See Pls. 15 e; 16 a. The walls connect with Preherodian room 31 of L. T. 3. The Postherodian houses are gone, except for the terrace wall between L. T. 3 and 4.

Sept. 20-24. L. T. 4-5 a-c. Cutting through street floor and still clearing Preherodian floors.

Sept. 24 to Oct. 19. L. T. 4-5 a-c. Cutting out floors of Preherodian rooms, clearing cisterns, revealing rock surface and Israelite walls. The floors of the Preherodian houses next to the street (Lambda) were partly on yellow debris (Israelite). The cisterns yielded Hellenistic objects, including coins. No object later than the 2d Cent. B.C. was found in the houses. Under the floors, there were Hellenistic and older objects including under the floor of room No. 52 one Ptolemaic coin (Reg. No. 2122) and two illegible coins. See Pls. 14 c; 16 a.

#### IX. LOWER TERRACE EAST, 1910

On July 6, 1910, arranged to excavate a strip east of L. T. 4-5 and separated from it by the dump-heap of H. S. Hoped to find a continuation of the Greek Fort Wall.

July 9. Struck the rock-scarp of the Omri palace.

July 9-11. The thieves' hole found in H. S. filled with black debris continues eastwards. The Fort Wall which has been removed by stone thieves undoubtedly continued eastward beyond the limits of L. T. E.

July 12. Opened tunnel and cave, and cleared Roman house adjacent to entrance of tunnel.

July 13-15. Cut through floor of Roman house. Sifted dirt in tunnel and cave. See Pl. 52 a.

July 16-30. Cutting through from L. T. E. to H. S. along the face of Omri scarp. See Plan No. 5.

#### X. SUMMIT STRIP 3, 1909

Sept. 15-18. Removing dump heap of 1908, descending by a stair cut in earth to throw it on L. T.

Sept. 18. Measured out S3 into 7 sections,—5 running E and W on the west side (lettered a-c from S) and 2 running N and



S on the east side (lettered f, g, from W). The southern part of f, g was occupied by the working stair.

Sept. 20. Revealed remnants of low walls of indeterminable date in top metre of debris. See Pl. 26 a (remnants high up in middle).

Sept. 21–23. Clearing away usual black debris, to a depth of about 2 m., containing objects of First to Third Century B.C.

Sept. 24. Top of Israelite foundation walls appeared in d, e, f, g.

Sept. 25–Oct. 6. In the northern section (e), the Greek Fort Wall appeared again. Between the Fort Wall and the Israelite wall, trodden yellow debris (now known as the mason's debris of the Ahab courtyard) was found intact (see Pl. 26 a). The Fort Wall itself was in a construction trench cut in this debris, as usual (see Pls. 26 and 53 a, and Fig. 9). South of the massive Israelite wall over the dressed SW angle of the Ahab courtyard, the lower levels showed disturbed black and yellow debris, containing Israelite, Greek, and Hellenistic objects.

Oct. 7. Underneath this disturbed debris, Greek walls extending southwards under the Preherodian street (see Pls. 25 a, b; 30 a), and finally

(Oct. 8–10) a bed of hard yellow debris containing the *dressed* Israelite walls. See Pls. 26 b, c; 27 a, b, and Fig. 9.

Oct. 1–25. Removing debris from between the street walls, and excavating rooms south of street. See Pl. 15 d.

Oct. 12–25. Clearing cistern in street at southwest corner of structure with apse. This cistern, filled with dumped debris, lay under the intact floor of street Lambda. It was filled therefore at the latest during the construction of the last Preherodian town. Five legible coins were found in the cistern, giving the names of Ptolemy I (Reg. No. 2688), Antiochus III (Reg. No. 2547), and Antiochus IV (Reg. Nos. 2806, 2807, 2689), and two illegible Seleucid coins. The other contents included a Megarian bowl (Reg. No. 2062), Megarian potsherds, Rhodian jar-handles, black-glazed and early red-glazed pottery, a few fragments of late red-glazed pottery, fragments of blue faience and other objects, but nothing

which could be dated with certainty to a time later than 150 B.C. The scarcity of the fragments of fine red-glazed plates, so characteristic of vault cistern 2, is noteworthy. Pl. 25 a, b.

#### XI. SUMMIT STRIP 4, 1909–1910

1909.

Oct. 9–19. Carried out the dump-heap of 1908 from strip 4. This was thrown over the southern edge into a field belonging to Salih Abu 'Ārif with his consent.

Oct. 19. Divided S4 into seven sections like S3,—five (a–e) E–W sections on the west, and two (f–g) N–S sections on the east. The earth from a–e went into Trench F (1908), that from f–g went out over the apse structure into L. T. 5.

Oct. 19–25. S4, a–e E, and f–g. In S4 a–e (eastern part) and f–g uncovered two stair-tanks belonging to a house (Severan period), the floor of which had been destroyed, and found the walls of another house underneath. See Pl. 31 a, b.

Oct. 19–26. Nov. 1–3. a–e, W. In S4 a–e (western part) we descended through a mass of broken mixed black and yellow debris alongside the western face of a bank of yellow debris (afterwards known as the filling of the Ahab courtyard). See Pl. 32 b. The disturbance of debris was caused by a Roman wall, part of the Roman SW tower (see Plan 2 CD 12–14), running north from an angle on the Greek Fort Wall in S3 e.

1910.

July 4. Resumed work on S4, rooms 330–354.

July 13. Began clearing away the Severan rooms, revealing the Herodian house (330–345) and street.

July 28–31. Cleared away wide rough Severan wall, built along and against western wall of temple, to Herodian floor. Found, east of Herodian street and under street floor, a Preherodian floor (Rooms 201–204) only a few centimetres down. See Pls. 31 b; 32 a; 33 b, c; 53 c; and Fig. 14.

Aug. 1–5. Removing floors of S4–345 to 357, revealing the floors of the building later called the Ostraca House. The debris above the floors of the Ostraca House



was dirty yellow debris (loose filling) containing Israelite potsherds, a scarab (Reg. No. 3704), and lamps. See Pl. 33 d. This debris had apparently been thrown in to a depth of 50 to 60 cm. in a leveling operation in the early Post-Israelite period. Fragments of walls of two building periods were found between the Herodian and the Israelite floors. See Pls. 34 a; 33 c, f; 34 c; and Fig. 14.

Aug. 6-10. Photographs and plans of Ostraca House.

Aug. 10. Began carrying out floors of Ostraca House.

Aug. 11. Found first potsherd with Israelite inscription (Reg. No. 3855) in packed layer of dirt (about 20 cm. thick) along east wall of room 401. Immediately started sifting the dirt already carried out, but found only a few small uninscribed potsherds. From now on, every basketful which might possibly contain ostraca was carefully sifted; but all except a few unimportant fragments were found by the Egyptians before the dirt reached the sifter.

Aug. 12. In room 418 in black surface debris (30 cm. thick), ostraca (Reg. Nos. 3863-3868). In room 414 in same debris above ledge of foundation wall on west side, the carved ivory dagger-handle (Reg. No. 3862).

Aug. 13. The character of the three layers of debris under the floor of the Ostraca House was clearly recognized. See Pl. 53 a.

Aug. 13-18. Rooms 401-423. Removal of sub-floor debris of Ostraca House proceeded through rooms 401-423. See Pls. 36 a; 33 f; 34 d.

Aug. 17-18. Removed all superimposed debris, potsherds, etc., from floor of room 424, and from above Greek Fort Wall. (1) Cleared out construction trench of Greek Fort Wall, and sifted dirt, finding only Israelite potsherds. (2) Removed filling of room, and sifted, finding only Israelite potsherds. (3) Removed mason's debris, and sifted, finding only a few minute scraps of Israelite pottery. See Pl. 53 a.

## XII. SUMMIT STRIP 5, 1910

June 27-28. Carried out dump-heap of 1908 over the street dump in S3 to L. T.

June 28. Laid out S5 in 8 sections,—4 N-S sections (a-d) covering the space between the Greek Fort Wall, S3, and the SW edge of the summit, and 4 E-W sections (e-h) covering the space between S4, S7, Trench F, and the W edge of the summit. Began work on sections a-d.

June 29-July 3. S5 a-d. Went down through black debris filled with Hellenistic and Roman objects. Encountered only a few fragments of Roman (?) walls. Along the southern side at a depth of about two metres, revealed the continuation of the Preherodian street of L. T. and S3. Between that and the Greek Fort Wall opened a great hole (apparently antedating the Roman period), from which all building-stones had been removed down to rock. The hole had been filled by dumping. The filling contained an enormous quantity of potsherds and other small objects of the Hellenistic and earlier periods lying in a mass, about a metre below level of street.

July 4-7. S5 a-d. A thin irregular layer of yellow debris on the rock was removed revealing lines of Israelite walls cut in rock and a few stones still in place. See Pls. 28 a; 26 b, c. The removal of the Israelite building stone was the object of the filled hole described above.

July 8-29. S5 d. Found Greek Fort Wall had been reconstructed at SW corner; and we cleared away in turn Roman wall and reconstructed Fort Wall, finding a round Israelite tower underneath. See Pls. 28 b; 29 a, b; 30 c-e.

July 1-7. S5 e-h. Opened sections e-h in northern part of S5. Went down through debris disturbed by big Roman walls and probably by stone theft. See Pl. 32 c (July 4). Found fragments of heavy walls with Herodian masonry, of Preherodian houses of three periods, foundations of Greek Fort Wall, and the outlines of a large addition to the Israelite palace.

July 8-13. S5 e-h. Cleared out the lowest debris to rock. This debris was largely yellow limestone. The Israelite walls so far as preserved were embedded in this debris.

July 14-29. Carried out all the Roman walls and cut out the inside of the Greek Fort Wall on the west, in order to clear up plan of Israelite building. See Pls. 29 b (July

22), c (July 26), d (July 20); 30 f (July 29). In the Herodian period the inside face of the Greek Fort Wall was lined with Israelite blocks as a foundation for Herodian wall above. See Pl. 29 c. In the angle of the Greek Fort Wall there was an inexplicable L-shaped mass of rubble built partly over the Israelite stones just mentioned and against the Greek Fort Wall. See Pls. 32 c; 30 b. This rubble mass was in three sections, each with a rough rubble facing and stone-filled interior, and each built against the one south of it. The interior contained Hellenistic potsherds only.

July 30 to Aug. 1. S5 e-h. Photographs and plans. On Aug. 1 started dump from S7 into S5.

#### XIII. SUMMIT STRIP 6, 1910

The progress of the work being held back in S5 by the examination of the SW corner, which deprived us of a dumping place, I opened a strip in front of temple, piling the dirt on the eastern edge of the summit in continuation northwards of the S1 dump-heap. For work of 1908 see Pls. 17 a; 18 a-d.

July 14-20. Divided S6 into 9 strips running E and W, lettered a-i from the S.

Cleared through debris containing Roman as well as Hellenistic objects to a surface level with foot of altar.

July 20-23. Carried out filled debris to a surface 4 metres under level of foot of altar. This was manifestly the filling of a great area excavated in preparation for the construction of the temple, and filled in to the level of the foot of the altar (Herodian level). This area extended through sections a-e practically to rock. In d-e there was a thin layer of yellow Israelite debris. In f-i the progress was retarded by foundations of a house about on the Herodian level. Underneath this house dirty yellow disturbed debris. On the north the Greek Fort Wall.

July 23-27. Enlarged S6 westwards to edge of Herodian excavation. Descended in spaces between late walls in f-i and exposed Greek Fort Wall along whole N side of S6.

July 27-28. Cleared to rock in S6 a-e. Opened cistern-cavity (shaft swept away by Herodian clearing).

July 29. Finished cistern. Work was stopped until Aug. 8. See Pl. 19 b (cistern refilled).

Aug. 8-18. Resumed work in S6 N (f-i), building a retaining wall across middle from east to west and dumping behind on S6 S (a-e). Retaining wall broke on Aug. 16, stopping the work for a few hours. Cleared away house, rooms Nos. 601-606, and the debris forming our working stair. In f, g there was packed yellow debris, falling away to north. In this were found the floor and edges of a large water reservoir, or pool, built on rock, and undoubtedly Israelite (see Pl. 21 a). The rock from the northern edge of the pool to the rock-scarp north of the altar had been cleared in Israelite times. The rock-scarp was that of the Omri palace. The rough pillar of stone uncovered in 1908 just NE of the altar remained unexplained. It was outside the Omri palace, and may have been a roof support of some room of the Ahab addition. It will be necessary to clear a considerable area eastwards to make the nature of this pillar clear. See Pls. 20 c (Aug. 17, morning); 20 d (Aug. 17, evening).

Aug. 16-19. Cleared further east along Greek Fort Wall. The objects found came from black debris (S6-626).

#### XIV. SUMMIT STRIP 7, 1910

S7 was the small strip lying between S4, S5, and Trench F. It was divided into four working sections, all running east and west. The southwestern corner section was a; the northwestern, b; the southeastern, c; and the northeastern, d.

Aug. 1-3. Cleared away old dump (1908) over c-d. The surface slopes away to the west. Cleared away surface debris over a-b, revealing, about 50 cm. under surface, a series of broken walls only 20-50 cm. high, with two water-conduits (leading to cisterns) just under the floor. In western part, a pavement of stone slabs. This was part of the Atrium House (Herodian). See Pl. 53 e.

Aug. 4-6. Revealed a series of circular vats in c-d belonging to a house the floor of which had disappeared. See Plan 9 E 10-11. Was about level with floors of Severan period. See Pl. 33a. Finished clearing floors of Atrium House in a-b.

Aug. 8-13. Cleared away Severan vats in c-d and revealed Atrium House (Herodian), a part of the Herodian house in S4. See Pls. 34 a; 35 a. In the debris under the smaller vat, a coin of Herod I (Reg. No. 3822, 34 B.C.) Cleared away the Herodian walls in a-b, descending through disturbed debris containing fragments of walls but no floors.

Aug. 15-18. Clearing a-b to level of Ostraca House. Removing floors and sub-floor deposits of Atrium House in c-d. Preherodian conduits and cistern-mouths just under the floor, so that a house of this period must have been leveled away in building Atrium House.

Aug. 19-20. Cleared a-b to rock (see Pls. 35 b; 36 b). No trace of continuation of Ahab courtyard debris, but well built early Post-Israelite walls in disturbed yellow debris. This area is, in fact, over the western wall of the courtyard, and the foundation lines of the wall were found on the rock-scarp underneath. Outside the scarp, remains of walls of the Third Period (Jeroboam II, Round Tower), partly covered by Post-Israelite walls. In face of rock-scarp, entrance to a cave (see Pl. 36 b, below).

Aug. 22-Sept. 14. S7 a-b, cave. Cleared the cave in S7 b. Thirty-five rudely cut steps lead down to rough cavity. Roof and sides are in bad condition; great blocks of stone have fallen, and many slabs have scaled off. Where original surface is preserved, there are tool-marks. Purpose not clear; not cemented. Both tunnel and cavity are filled with debris to two-thirds their height. Debris is all yellow limestone, and contains abundance of Israelite potsherds (none inscribed).

Aug. 20. S7 c-d. Under the Herodian street east of the Atrium House, came on the continuation northwards of room 417 with same series of debris (see Pl. 38 a, b). In floor debris found ten more fragments of ostraca, three of which fitted fragments found in 417.

Aug. 22-23. S7 c-d. The continuation of 417 was worked out northwards and yielded more ostraca, always in same floor dirt.

Aug. 19-25. Removing debris under the Atrium House and alongside it on the north. In d, or the north, there were no walls between Atrium walls and rock.

On the rock there was disturbed dirty yellow debris. Under the Atrium House there was black debris, containing fragments of walls of a Seleucid house, and an older house whose walls broke through the Ahab courtyard strata leaving blocks of these strata undisturbed. The floor of this house (Osorkon House) was 179 cm. below the floor of the Preherodian house, and on about the same level as the courtyard floor. In room 742, northern part, in floor debris of a block of courtyard strata, ivory handle in the form of a *uraeus* and fragments of an alabaster jar with the names of Osorkon II of Egypt.

Aug. 26-31. S7 c-d. Cleared S7 c-d to rock, leaving Preherodian and earlier walls in place (see Pls. 36 b; 37 a).

Sept. 1. S7 d. Carried out Preherodian walls in Osorkon House (see Pl. 35 b). Found more fragments of Osorkon jar under wall in 742 in same floor debris as before (see Pl. 54 b).

Sept. 1-3. S7 c-d. Continued excavation of northern end of corridor 417, and found one more Israelite ostrakon in S7-723.

Sept. 3-14. S7 c-d. Included in S7 Trench F of 1908 and the temple portico on the west of temple vestibule. The debris was disturbed mixed debris as usual, until floor of courtyard was reached.

Sept. 15. S7 a-b. Opened a second cave in rock-scarp north of first cave. About 2 metres from entrance this was blocked with masonry, forming wall of cistern S7 No. 5.

Sept. 16-26. S7 c-d. Cleared rooms 770-777, finding ostraca in usual floor debris. See Pl. 38 a, b.

#### XV. SUMMIT STRIP 8, 1910

S8, adjoining Trench F on the north, included the tongue of unexcavated ground between Trench F and the temple vault. The strip was divided into 5 sections lettered a-e from the vault westward. The tongue of ground was lettered f-g (two additional sections).

Aug. 3-6. Work began on S8 a-c. Removed usual surface debris; reached fragments of Roman floors on Aug. 6th.

Aug. 6. Began work on f-g.

Aug. 8-11. Worked out S8 d-g to Roman level. North of vault, cleared blind stairway (see Pl. 38 a).

- Aug. 18-20, 22. Desultory clearing in Rooms 801-806 in which Roman floors were not preserved. S8-801 is the southern end of the subterranean corridor, elsewhere called S9-901 or 1001.
- Sept. 1-19. Resumed work on S8. Cut out fragments of Roman floors and cleared downwards, revealing in a-c a series of Preherodian walls (broken off at the Roman level, see Pl. 40 a), and in d, e an enormous filled hole, with remnant of a Roman wall (a tower), founded deep, but on debris (see Pl. 39 a).
- Sept. 8-14. Enlarged S8 northwards about two metres to a line drawn westward through the northern face of the vault (1908). Objects found here are referred to in the object register as from S8 a-c.
- Sept. 20-23. Cleared away floors of Preherodian house on east (a-c, f-g), and finished all except mass of masonry (room 840) west of vault (see Pl. 40 c). On west, d-e, still going down in filling of hole.
- Sept. 23-29. Removed Severan and Herodian masonry west of subt. corr. (opposite vault), and found deep cut in rock. On the west continued working out the great hole, revealing tower of Greek Fort Wall (see Pl. 39 c). Also cut out the debris in the outer angle (NW) of this western bastion of the Greek Fort Wall. Near rock, came on disturbed yellow debris in which were found Israelite potsherds and a gold ring with scarab (Reg. No. 4635). Israelite wall on rock.
- Sept. 30. Cleared rock-cut hole under S8-840, which was lined on the south with a stone wall (see Pl. 40 b). The last 80-100 cm. of debris was clean yellow. Broke down Roman wall and underlying debris between two parts of S8, revealing rock-scarp and Israelite walls (see Pl. 39 b).
- Oct. 1. Behind lining of rock-cut under S8-840 found a cavity in the rock, containing yellow debris and Israelite potsherds.
- Oct. 1-7. Worked on details of Israelite walls and Greek Fort Wall in western part of S8. Cleared to rock. See Pl. 40 d, e.
- XVI. SUMMIT STRIP 9 AND SUBTERRANEAN CORRIDOR, 1910
- S9 was between S6 and the subterranean corridor. Divided into 5 sections, lettered a-e from south. After the corridor was discovered, S9 was enlarged westwards to include the corridor.
- Aug. 22-Sept. 5. Cleared away surface debris to a series of walls with floors, arranged on each side of a street (see Pl. 23 c). On these, fragments of a later building. On Sept. 1 came on wall of subt. corr., and by Sept. 5 had cleared its western face to corridor floor.
- Sept. 6-17. Cleared out floors of rooms to rock all over southern part of S9. See Pl. 23 d (Sept. 13). On the north the rock drops away suddenly towards the north. In the NW angle between the corridor wall and the Greek Fort Wall is a room (S9-940) with a pillar. Its floor is 64 cm. below the corridor floor, 302 cm. below the top of the Greek Fort Wall, and rests on packed yellow debris in which are embedded Israelite walls. See Pls. 21 c; 24 a (Sept. 20).
- Sept. 19-26. Engaged with a few men in cutting sections in west wall of corridor (see Pl. 23 b), and working out lines of Israelite walls.
- Sept. 29-Oct. 8. Cleared subterranean corridor (S9-901) to Severan floor. See Pls. 24 c (Sept. 27); 24 d (Oct. 8).
- Oct. 10-11. Cleared out Severan floor to rock in subt. corr. as far as the middle, where the corridor crosses the rock-scarp running E-W (see strip 9, Sept. 6-17, above). Cleaned cistern found in S part of corridor, the shaft having been cleared away when corridor was built. See Pl. 24 e (Oct. 10).
- Oct. 20. Cleared out debris below floor of subt. corr. north of rock-scarp, yellow Israelite as far as Greek Fort Wall.
- XVII. SUMMIT STRIP 9 NORTH ADDITION, AND SUMMIT STRIP 10, 1910
- S9 N add. and S10 include the strip of ground north of the Greek Fort Wall where it bounds S9 and S6 respectively. S10 was divided into four sections lettered a-d from the east.
- Aug. 22. Work was started on S10, clearing away part of the old dump (1908), but was interrupted the next morning.
- Sept. 12-16. Cleared the floor of the subterranean corridor (S9 north addition) northwards from the Greek Fort Wall in hope of reaching the entrance of the

corridor; but it became apparent that the task was too great for the time at our disposal. The objects found were in disturbed black debris.

Sept. 19-21, 26-30, Oct. 1 and 6. Worked on S10, going down through disturbed black debris which contained a great quantity of Hellenistic potsherds and small objects, but also some Roman objects (a Tyrian-Roman colonial coin, etc.). The lower black debris showed exclusively objects of Third Century B.C. and earlier. Under this and on the rock was only a light layer of yellow debris. In the yellow debris, on the west, was a massive Israelite wall, and against it a lighter wall, perhaps a Greek house like S3-314 (see Pl. 21 b). The construction trench of the Greek Fort Wall was not visible, except in the yellow debris.

Oct. 12-13. Enlarged S10 d westwards under the eastern wall of the subterranean corridor to reveal more of the Israelite walls (see Pl. 21 b).

#### XVIII. SUMMIT STRIP 11, 1910

Sept. 21-30. Carried away dump-heap of 1908.

Oct. 1 and 6. Came almost immediately under surface on a maze of walls. The Roman floors were not preserved except in the street along the west wall, S11-1 (see Pl. 53 f). In rooms 2, 3, 11, and 13 Hellenistic floors were found. The earlier Hellenistic walls and floors were cut and damaged by the later Roman walls.

Oct. 7-10. Cleared away the debris in the Hellenistic rooms. Excavating the debris under Roman street, found a second floor about 30 cm. down. Under this, a wall standing on the eastern edge of the Greek Fort Wall.

Oct. 10-15. Carried out Hellenistic house walls, leaving the Roman walls; and excavated the part under the Roman street. All southern part of S11 carried to rock (see Pls. 41 a; 54 e). In S11-3 cistern, we took down masonry walls lining eastern and southern sides, and so came into a great cave filled with debris. This cave extended under all this part of S11, and was entered by a mouth, which was uncovered on Oct. 24, in the E-W rock-scarp west of the middle part of subt.

corr. (see Pl. 54 f). In the debris of the cave, Israelite pottery and a scarab.

Oct. 17-24. Worked on northern part of S11, which was divided into sections lettered v, x, y, z, from the east. We cleared off all the surface debris from a Roman tower and wall, and followed down the penetrations, revealing lines of Greek Fort Tower and Wall and certain Israelite walls; but were unable to clear away the Roman masonry. See Pls. 41 b; 53 b.

#### XIX. GATEWAY, 1909-1910

1909.

June 9. Work was begun (see Pl. 42 a). Cleared tops of two round towers.

June 10. Worked between two towers, exposing their outlines.

June 11-12. Cleared Herodian Gateway between the two towers to level of a road between. See Pls. 44 a; 45 a.

June 19-21. Cleared houses NE of N tower to first floors (Roman) (see Pl. 45 a).

June 22-23. Cleared away road in Gateway to masonry, revealing cross wall on which Gateway was built.

June 24-26. Cleared western face of cross wall; cleared paved road leading up to Gateway from below (see Pl. 44 a).

June 28-29. Cleared around N tower to square tower underneath it.

June 30-July 6. Cleared square tower, Israelite cut, glacis wall in front, and the whole angle between N tower and Herodian wall running west. See Pls. 42 a; 43 a; 44 b; 45 b.

July 7-9. Began clearing a small space along the northern side of the Herodian W wall.

July 26. Resumed work inside Herodian W wall.

July 27-Aug 5. Cleared space inside Herodian W wall to rock (see Pl. 44 c).

Aug. 6-13. Cleared houses inside Gateway NE of N tower to second floors.

Aug. 11-19. Clearing around outlying SW tower (not finished).

Aug. 13-19. Cleared surface of paved road leading to Gateway, working westwards (see Pls. 42 b; 43 a).

Aug. 13-17. Cleared northern face of Herodian ornamental gateway.

Sept. 15-17. Finishing clearing SW tower. For condition at end of 1909 see Pl. 45 a (Nov. 18, 1909).

1910.

Divided bluff running north from N tower,—the edge of an agricultural terrace,—into nine strips, running east and west, and numbered N. G. T. 1 to 9.

June 15-18, 20. N. G. T. Cleared to Roman house, to Greek Fort Wall, to rubble pavement, and elsewhere to rock. See Pl. 43 b.

June 21-22. N. G. T. Cleared rest of Roman house above the Greek Fort Wall on a terrace corresponding in level with the floor marked on the northern face of the Herodian city wall.

June 27-30. N. G. T. Cleared away Roman house, revealing terrace wall behind and Greek Fort Wall below. See Pl. 44 d.

June 23-25. N. G. T. Cleared another 10-metre section north of strip 9, being N. G. T. 10 and 11.

July 6-11. N. G. T. Cleared various points in strips 1-11, and began a new strip on the north (No. 12) which was never finished.

June 17. S. G. T. Began excavating western face of S tower (South Gate Terrace).

June 17-20. S. G. T. Removed metre of agricultural debris. Descending through weather surface into black debris, showing strata of weathering (see Pl. 46 a). The working sections are numbered one to seven,—three east-west sections next the tower (numbered 1-3 from north), and four east-west sections adjoining on the west (numbered 4-7 from north).

June 21-25. S. G. T. Clearing through black debris evidently formed by dumping. It contained Israelite potsherds, Greek red-figured pottery (Reg. No. 2914), Rhodian jar-handles, Hellenistic pottery, an agate cone-seal (Reg. No. 3017), a coin of Ptolemy II (Reg. No. 3105), and one of Antiochia ad Orontem (Reg. No. 3024). The construction trench of the Herodian tower cut through this black dump (see Pls. 46 a and 54 c),

showing that the debris was deposited previous to the construction of the tower. The upper layer was a modern agricultural stratum. Under the black debris was a semicircular mound of yellow debris centering on the gateway. In this yellow debris, the Assyrian letter sealing (Reg. No. 2925) was found together with a few small Israelite potsherds.

June 25-30. S. G. T. Cleared lowest debris to rock. Embedded in the yellow debris was an Israelite foundation wall. The rock was dressed to the lines of the Israelite walls. In S. G. T. 4, cleared away the upper debris beside the road, finding the objects of late date, entered on June 28.

July 6-10. Clearing obscure corners of masonry (see Pl. 46 a).

July 7-10. Cleared NE of ornamental gateway, and uncovered Israelite wall on rock (street wall?). For conditions at end of 1910 see Pls. 42 b; 43 a.

#### XX. BASILICA, 1909

The trenches cut in 1908 had revealed the northern outlines of a building, the plan of which was still obscure. Pl. 47 a shows Basilica and Forum previous to excavation.

June 1. Began cutting out block of debris left in the building, working from the north. This block consisted of two strata, both apparently due to agricultural terracing. The upper stratum was about 100 to 120 cm. deep. The lower bore on its surface a few rough field walls (boundary walls), probably Arab; and it descended to a light layer of debris (third stratum) covering floor of building.

We worked along the top of the third stratum carrying out the two upper strata together. It was the second stratum which contained, in the coarse layer along the bottom, the vast majority of objects found (see Pl. 54 d). These objects were mostly glass fragments, lamps, potsherds, and coins of the late Roman period, but there was one coin of Justinianus I and one of Malik-el-Kamil, 1218-1238 A.D.

June 22-23. Clearing away floor stratum. Stone pavement was gone from central

court, and we followed surface of foundation of pavement (see Pl. 47 b). Coins of Gallienus, Maximianus, Licinius, Constantine II, Constantius II, Constans II, Honoria, Arcadius. The floor of the colonnade is mosaic (see Pl. 50 a).

June 24-25. Clearing apse (see Pls. 47b; 50 b). The floor of the apse is lower than the floor of the rest of the Basilica, and the debris in it belongs to the third stratum. A weathered surface covered the third stratum continuously over apse and court.

June 25-28. Apsē contains a curious little semicircular room with tiers of seats. On the south of this was a column basis on 60 cm. of debris and two cross walls also on debris (see Pl. 50 b). These are earlier than the agricultural terracing of the second stratum. In the dirt, scattered, partly under basis, a lot of 122 Roman coins:

Aurelianus	2	Constantine I	31
Probus	2	Crispus	2
Numerianus	3	Constantine II	7
Diocletianus	11	Constantius II	23
Constantius I	2	Constans II	3
Maximianus	10	Constantinople	3
Maximinus	1	Rome	1
Licinius	13	Illegible	8
—	—	—	—
	44		122

June 28-July 1. E cut. Enlarged excavated area by a N-S strip on the east which joined western colonnade of Forum with Basilica. Also carried out Arab walls left standing on debris in Basilica, and cleared broken masonry N of apse (see Plan 12).

July 2-5. E cut progressing, being cleared to a floor (see Pl. 49 a) just below the top of the square pedestals on which stand the bases of the columns of the Forum colonnade (Forum floor). Also clearing out stone-thieves' trench by means of which the eastern walls of the Basilica were removed. Work north of apse continues, revealing masonry.

July 6-23. Removed floor stratum in E cut, revealing rock surface dropping away to north and massive walls running under Basilica (see Pls. 49 b, c, d; 48 a). Debris, Israelite to Hellenistic. Cleared out debris from foundation compartments in

northern part of Basilica (see Pls. 48 b; 50 c; 51 a). This debris was certainly older than the Herodian Basilica and older than cistern No. 3.

July 20-24. Cleared cistern No. 1, the cistern used during occupation of Basilica. Objects all Roman, including 22 coins of Roman emperors from Aurelianus to Constans.

July 21-26. Wherever mosaic pavement was broken, cleared through to rock.

July 23-27. Cleared cistern 3, containing Israelite potsherds. See Figs. 160 and 161.

July 23-Aug. 5. Cleared cistern 4, containing bronze statuette of Hercules (Reg. No. 1418).

Aug. 6-9. Cut a trench along supposed line of southern wall of Basilica.

Aug. 9-14. Removed floor of central court to rock (see Pl. 51 b). Attempted to clear cistern 2, but was obliged to abandon it on account of falling of rock from roof.

Aug. 16-18. Cleared up masonry joints at various points. Cleared to rock small room south of western entrance of amphitheatre.

#### XXI. KAID'S LAND, 1910

This was a small, irregularly shaped field on the edge of the village in front of the mosque. Sheikh Kaid opened it to take out stone for an addition to his house and allowed us to excavate it without charge. The work was begun on August 1 with two gangs (about 50 people), but was stopped before noon by the Turkish commissioner on the ground that it was inside the village. He telegraphed to Constantinople for instructions and on August 4 permitted us to resume work.

Aug. 5-8. By the evening of Aug. 5, the top dirt was cleared off. By Aug. 8, a series of walls was exposed, some of them enclosing rooms with floors. Underneath one was a vault (not cleared then). The debris contained mostly Roman objects.

Aug. 16-31. Cleared vault covered with a flat roof of stone slabs. Cleared westwards through similar walls. See Pl. 52 b.

Sept. 12-15. Cleared out lowest levels to rock. On the whole, a negative piece of work. The strip was not large enough to give a comprehension of the buildings. The basis was a rocky slope. So far as we could see, the buildings were Roman below and later above. But mixed in the debris were also a few Hellenistic and even Israelite objects.

#### XXII. SAMARRA'S LAND, 1910

On the western side of the village members of Samarra's family were preparing to build a house on a field. This they offered to let us excavate free of charge.

Sept. 1-5. Removed surface dirt, and came

on a series of room walls. The floor of these rooms was above the walls as preserved (shown by staircase and doorsill on the east). Removing the debris in the foundation compartments, found several hundred Roman coins, glass, and pottery, and a few Seleucidan coins, a scarab, and other earlier objects.

Sept. 8-15. Cleared a second series of walls under the late house and descended to rock. See Pl. 52 c (Sept. 12). The debris here contained objects of Israelite to Seleucidan periods.

The top house was late Roman or Byzantine. The lower was probably Seleucidan or Herodian.



# INDEX I

## REFERENCES TO REGISTRATION NUMBERS

The references in this Index occur mainly in the sections dealing with the archaeological material (Part I, Chapter III, and Part IV). All registration numbers mentioned in the text are included, except those of the jar-handle stamps found in 1908, which are omitted because no information about them is given beyond what is contained in the list (p. 18 f.). In the list of similar stamps found in 1909-10 (pp. 311-315) the registration numbers are not given. The alphabetic arrangement in both cases makes it easy to consult these lists. If a registration number which is given in the List of Plates (Vol. II, page IX) is not found in this Index, the reader will understand that such number is not described in the text. The registration number, in **boldface** type, is followed by page number and subdivision of page. When two or more references to the same registration number occur, they are separated by commas.

4 28 A 2 5 27 C 1 6 17 A 1 9 27 A 19 11 27 V B 4 12 25 IV 5 13 26 29 14 25 J 5 15 25 J 1 16 22 A 1 24 25 J 2 25 23 F 1 26 27 A 13 27 27 V B 3 28 28 C 2 29 27 A 16 32 19 d 10 33 19 d 9 34 23 G 7 35 24 I 1 36 19 d 1 41 23 G 1 43 25 K 3 44 23 G 8 45 24 I 2 47 15 37, 26 30 48 27 A 17 49 27 A 18 54 25 K 8 58 26 IV 17 60 24 H 8 63 22 A 2 64 22 C 1 66 28 B 2 69 23 G 9 71 28 A 1 72 28 B 3 73 26 IV 26 74 24 I 3 75 24 I 4 76 23 F 2 77 23 F 10 78a 24 I 5 78b 24 I 6 81 25 IV 12 82 28 B 1 83 26 IV 23 84 28 A 6 85 22 B 1 90 24 H 9 93 27 C 2 94 25 IV 9 96 23 F 3 97 24 I 7 98 22 B 2 99 22 C 2 100 24 I 9 101 22 A 3 103 22 B 3 105 24 H 11 106 25 K 9 108 24 I 10 110 22 C 4 111 22 A 5 116 24 I 11 122 26 a 1 124 24 H 4 125 24 H 5 126 23 D 3 128 24 I 12 134 18 b 1, 24 H 6 135 23 F 4 137 26 c 7 138 19 d 2 139 25 IV 4 148 19 C 1 149 22 C 5 150 24 H 1 153 21 1 154 26 c 8 161 23 D 1 163 25 IV 6 164 26 33 166 22 C 6 167 22 C 7 168 22 C 8 169 22 C 9 172 28 A 7 179 22 C 10 181 26 34 182a 27 VI B 1 182b 27 A 2 183 22 C 11 184 24 H 12 192 25 K 1 192a 27 VI B 2 195 19 d 3 196 19 d 4, 23 G 5 198 20 30, 217, 25 IV 1, 46 201 26 IV 24 202 19 C 2 203 23 F 11 205 28 A 9 206 26 c 1 210a 25 IV 14 221 19 d 5 223 23 F 5 224 23 D 4 225 23 D 6 228a 27 VI B 3 228b 27 A 4 229 26 c 13 230 28 A 5, 28 C 3 231 24 I 13 261 22 C 13 262 22 C 14 263 23 D 5 264 23 F 12 265 26 c 2 276 24 I 14 277 25 IV 11 280 27 V B 2 300 26 c 16 307 25 IV 10 340 27 A 6 341 27 A 7 342 27 A 9 343 27 A 10 344 27 A 11 345 27 A 12 346 26 b 1 418 25 J 6 420 26 a 2 421 26 c 3, 365 26 439 22 C 12 440 26 c 12 442 19 d 6 448 27 V B 1 460 28 D 1 463 27 A 8 472 26 b 3 473 26 c 15 476 22 A 4 481 26 IV 18 491 24 H 10 492 22 C 3 493 27 V B 6 494 22 B 4 503 26 c 10 510 22 C 15 511 25 J 3 514 26 c 9 516 22 C 16 521 26 IV 19 522 19 d 7, 23 G 6 523 23 D 2 524 26 a 3 525 27 A 3 537 20 3 538 20 4 539 20 5 540 21 2, 266 5 a 541 23 E 1 542 26 a 4 543 26 b 2 547 24 G 10 548 23 C 17 549 28 A 3 550 27 C 3 552 25 J 7 557 23 C 18 562 24 G 11 563 23 G 2 564 27 A 14 566 24 I 8 567 23 C 19 568 24 H 7 569 26 32 571 28 D 2 572 24 H 13 579 26 IV 25 580 20 6 580a 20 7 581 20 8 582 25 IV 15 587 20 9 588 20 10 589 26 IV 27 590 27 VI B 4 591 28 C 1 592 25 K 2 594 25 IV 3 595 26 IV 20 597 25 K 6 600 25 J 4 602 26 31 605 24 I 15, 306 13 607 20 11 608 20 12 609 20 13 610 20 14 611 20 15 612 20 16 613 20 17 614 20 18 615 20 19 616 20 20 617 20 21 618 20 22 618a 20 23 621 21 3 623 26 c 5 627 25 K 4 629 18 b 2, 23 G 3 630 19 d 8, 23 F 8 631 18 b 3, 24 G 12 632 26 IV 22 633 20 24 634 20 25 635 21 4, 84 636 21 5, 84 637 21 6, 84 647 27 A 1 648 25 IV 7 649 21 7 651 27 A 15 652 21 8 653 27 A 5 654 20 26 654a 20 27 655 20 28 658 27 D 1 659 27 C 5 660 21 9 667 20 29 668 25 IV 8 669 26 c 6 670 21 10, 256 30 b 671 26 c 17 672 25 K 7 673 18 b 4, 23 G 4 674 26 c 14 678 22 II 11 679 22 B 5 686 26 IV 21 688 27 V B 5 689 28 A 11 690 23 F 6 691 26 c 11 694 27 D 2 696 26 c 19 697 28 A 8 699 23 F 7 700 25 K 5 706 26 28 707 26 c 18 711 22 B 7 712 24 H 3 713 23 F 9 716 27 VI B 5 718 24 H 2 719 23 E 2 722 23 E 3 726 27 C 4 730 22 II 12 731 25 IV 16 732 28 A 10 733 28 D 3 734 17 B 1 735 17 B 4 736 17 B 5 737 17 B 2 738 17 B 3 739 24 I 16 740 22 II 13 741 22 II 14 742 17 B 6 744 22 B 6 745 25 IV 13 747 27 VI B 6 748 28 A 4 751 26 c 4 752 21 31, 25 IV 2, 46, 175 789 351 VII 4 a 792 371 8 a 796 331 III 4 798 325 6 a 799 325 7 800 325 XI a 801 325 XI b 802 325 XI c 803 325 5 a 804 324 Va 806 325 5 b 807 325 3 808 325 9 809 323 F II a 810 324 VI f 811 324 VI e 812 324 IV j 813 325 4 814 325 VII a 815 324 IV p 816 324 III 817 324 IV i 818 323 F II b 819 324 IV n 826 349 IV 2 d 827 360 9 829 328 22 830 341 1 a 832 325 VIII e 833 325 VIII g 836 371 8 b 842 324 VII i 844 350 V 4 845 325 XI d 846 325 XI e 850 324 VI h 851 325 10 c 852 325 VIII h 854 324 IV h 855 324 IV t 856 323 F II e 858 345 J 2 a 861 345 J 3 a 862 324 VI d 863 324 VI e 864 325 VII b 865 324 IV w 866 324 IV u 869 324 IV s 870 323 F I a 871 323 F II d 874 324 IV q 875 323 5 f 876 345 J 3 b 878 324 IV d 879 324 IV g 880 324 IV v 881 324 V b 884 332 3 g 886 368 B 2 c 890 354 12 891 362 XI 5 a 898 368 B 2 d 899 325 6 b 900 324 VI b 901 324 IV a 902 325 VIII d 905 323 F I c 906 349 V 1 a 907 349 V 2 a 910 340 4 a 911 340 4 b 912 325 XI 2 a 915 324 VI g 916 324 IV e 917 345 3 c 920 325 XI f 922 325 6 c

- 923** 325 X 1 g **925** 325 X 2 b **929** 325 IX a **930** 325 8  
**931** 325 IX b **934** 360 11 a **938** 341 1 b **939** 381 IV 4  
**940** 345 I 4 **941** 324 IV o, 332 3 d **942** 331 III 10 **942A**  
324 IV k **943** 331 III 9 **943A** 324 IV r **944** 324 IV c  
**945** 324 IV l **946** 324 IV m **947** 324 IV b **949** 324 VI a  
**950** 324 IV f **951** 324 II e **952** 324 II f **954** 349 V 2 b  
**955** 349 V 2 c **958** 367 3 b **961** 342 2 c **962** 325 10 b  
**963** 325 VIII c **964** 366 D 5 **968** 369 5 a **972** 331 III 2  
**973** 325 X 1 h **974** 325 VIII f **975** 362 XI 5 b **976**  
359 3 a **977** 349 V 2 d **979** 340 4 c **980** 331 III 1 **982**  
323 5 a **983** 325 VIII i **988** 381 III 8 a **989** 373 11 a  
**990** 370 7 a **993** 325 6 d **994** 325 X 1 i **995** 325 X 1 j  
**996** 325 X 1 k **999** 339 II 1 a  
**1000** 372 H a **1002** 368 B 2 c **1007** 330 2 a **1008**  
349 V 2 e **1009** 331 III 6 **1016** 323 F I c **1017** 323 F I d  
**1018** 323 F I b **1019** 351 VII 2 **1020-1022** 374 16 a  
**1122** 272 1 **1150a** 329 9 b **1151** 267 15 b **1169** 260  
10 d **1181** 273 1 **1187** 264 7 c  
**1195** 257 38 a, 378 6 **1196-1255** 378 6 **1263** 273 3  
**1267** 272 3 **1268** 273 4 **1271** 258 4 c **1272** 267 9 h  
**1273** 266 7 a **1295** 267 11 a **1300** 267 15 c **1301** 267 9 a  
**1311** 272 2 a **1312** 273 2 a **1313** 273 2 b **1317** 272 2 b  
**1318** 262 27 c **1346** 374 16 b **1346a** 387 III 2 **1347**  
374 16 b **1348** 375 11 a **1349-1351** 381 III 7 **1355**  
373 15 a **1356** 373 9 b **1357** 375 11 a **1358** 381 III 7  
**1359** 374 16 b **1361** 341 1 c **1363** 382 3 a **1364** 359 3 b  
**1365** 382 3 c **1367** 332 3 c **1368** 381 III 4 b **1371**  
382 3 d **1372** 368 B 2 g, 378 6 **1374** 354 11 **1378**  
368 B 2 h **1379** 381 IV 3 a **1380** 360 11 b **1381** 349 V 1 c  
**1382-1383** 362 XII 1 **1391** 341 1 d **1392** 382 3 c  
**1395** 373 15 b **1396** 351 VII 5 a **1401** 332 3 f **1402**  
381 III 7 **1403** 373 10 a **1406** 382 3 f **1407** 368 B 2 f,  
381 III 7 **1408** 332 3 h **1411** 325 6 e **1412** 325 10 a  
**1415** 330 2 b **1417** 353 7 d **1418** 384 7, 407 **1422**  
322 III 1 a **1423** 281 3 d **1425** 325 VII c **1427** 334 7 a  
**1435** 364 10 **1437** 325 VIII a **1441** 325 X 2 c **1442**  
354 3 **1443** 383 I **1444** 308, 309 7 a **1445** 294 10 a  
**1446** 380 II 4 a **1451** 309 8 a **1453** 375 11 d **1454**  
318 I 2 **1457** 322 D II **1458** 370 G 6 a **1460** 319 I 2  
**1461** 308 6 i **1462** 294 9 a **1463** 372 2 a **1464** 334 9  
**1466** 379 I 3 c **1467** 303 31, 381 IV 2 a **1470** 294 α 5 a  
**1471** 294 β 3 **1472** 302 18 **1473** 350 V 3 a  
**1474** 299 9 a **1475** 302 16 b **1477** 372 3 a **1478** 329 2 b  
**1479** 339 I 1 a **1480** 339 2 i **1481** 303 27 a **1483** 321 IV 1  
**1484** 349 V 2 f **1485** 349 II 3 **1486** 351 VIII 2 b **1487-**  
**1492** 299 1 a **1493-1495** 301 2 a **1496** 301 7 a **1497**  
266 3 a **1498** 362 XI 4 **1499** 69, 267 12 a **1502** 349 V 2 g  
**1503** 350 V 3 b **1504** 349 V 1 d **1506** 372 2 b **1507**  
375 11 f **1508** 371 8 c **1509** 339 II 3 a **1514** 343 F 1 a  
**1515** 301 12 a **1516** 285 1 b, 310 II 1, 379 V 2 **1517**  
285 1 a, 310 I 3 **1518** 363 XIV 2 **1519** 265 12 a **1520**  
260 10 a **1521** 336 8 **1522** 340 1 c **1523** 307 b, 308 6 d  
**1524** 62, 248 1 **1525** 62, 248 2 **1526** 62, 248 3  
**1527** 62, 248 4 **1528** 62, 248 5 **1529** 62, 248 6 **1530**  
62, 248 7 **1531** 62, 248 8 **1532** 62, 248 9 **1533** 62, 248 10,  
**1534-1536** 62, 372 H b **1537** 62, 372 1 a **1538** 62, 360 13  
**1539** 62, 354 III 1 **1540** 62, 360 10 a **1541** 62, 348 11 c  
**1542-1545** 62, 368 B 1 a **1546** 339 I 2 a **1547** 249 I 3  
**1549** 339 3 b **1550** 372 H c **1551** 344 H 2 b **1552**  
387 D 2 a **1553** 52, 264 10 h **1554** 349 III 1 a **1555**  
367 1 a **1556** 266 5 b **1557** 334 4 c **1561** 52, 264 10 i  
**1562** 53, 266 2 c **1563** 52, 259 5 l **1565** 52, 257 41 a  
**1566** 252, 258 1 a **1568** 375 11 g **1569** 381 V 1 f **1570**  
286 III 1 **1571** 252, 254 I 1 **1572** 344 3 **1573** 255 20 a  
**1574** 380 II 2 **1575** 251 4 **1576** 353 4 h **1577** 318 I 1  
**1578** 361 IX 2 **1579** 255 18<sup>a</sup> a, 396 **1580** 396 **1586**  
352 4 a **1592** 361 1 a **1594** 372 2 c **1595** 361 X 3 **1596**  
302 17 a **1597** 339 3 c **1598** 264 10 j **1599** 52, 257 40 b  
**1600** 52, 264 7 b **1602** 355 4 a **1604** 384 8 **1605** 359 6 a  
**1607** 382 4 a **1608** 357 VII 2 a **1610** 304 34 **1611**  
299 10 **1612** 359 3 c **1613** 368 A 3 b **1614** 335 II 4  
**1615** 335 II 2 **1616** 335 II 5 a **1617** 344 I 1 **1618**  
335 II 5 b **1619** 335 II 5 c **1620** 368 A 3 c **1621** 381  
IV 8 a **1623** 259 5 a **1625** 382 5 a **1626** 355 3 a  
**1627** 357 12 a **1628** 357 11 a **1629** 365 17 **1630** 248 11  
**1631** 349 V 2 h **1632** 337 IV c **1633** 343 G 1 a **1634**  
344 I 1 **1635** 356 2 **1636** 387 D 1 **1637** 379 I 1 **1639**  
374 10 a **1640** 334 4 g **1642** 366 XV 4 **1643** 362 XI 6  
**1644** 365 25 **1645** 363 XIV 3 **1646** 376 I 1 **1652** 355 5 a  
**1653** 344 I 2 a **1654** 361 4 **1655** 368 A 3 a **1656-1658**  
368 A 3 b **1660** 372 1 b **1662** 344 I 1 **1663** 340 3 a,  
341 4 h **1664** 374 10 b **1665** 356 1 **1666** 319 II 4 **1667**  
311 **1668** 339 I 2 b **1669** 372 H d **1670** 357 VII 2 b  
**1671** 348 6 c **1673** 276 1 a, 310 I 1 a **1675** 336 6 d  
**1676** 360 14 a **1680** 359 4 a **1684** 367 4 b **1685** 373 9 a  
**1686** 266 3 b **1689** 47, 268 19 a **1690** 53, 266 2 d **1691**  
53, 266 2 e **1692** 350 VI 4 **1693** 351 VIII 2 a **1694**  
350 VI 3 **1697** 301 2 b **1698** 258 49 a, 397 **1700** 346 1 a,  
397 **1701** 347 2 a, 397 **1702** 347 2 b, 397 **1703** 381 IV 8 b,  
397 **1704** 336 4 a **1713a** 367 1 b **1714a** 370 E a **1715**  
53, 264 10 k **1718** 360 7 **1719** 361 6 **1720** 360 10 b  
**1721** 53, 266 3 c **1722** 53, 266 3 c **1724** 320 11 a **1725-**  
**1727** 53, 266 3 c  
**1728** 53, 263 31 a **1729** 53, 261 17 a **1732** 353 4 a **1733**  
371 9 a **1734** 373 12 a **1735** 341 1 e **1736** 329 3 a **1737**  
53, 266 3 c **1738** 320 10 a **1740** 373 8 a **1742** 53, 266 3 c  
**1743** 367 5 a **1744** 357 11 b **1745** 53, 266 3 c **1746** 367 3 c  
**1748** 349 V 2 i **1749** 321 II 4 a **1750** 53, 264 5 a **1751**  
53, 261 16 a **1752** 53, 255 13 a **1753** 53, 259 5 b **1754-**  
**1758** 53, 266 3 c **1760** 360 12 **1761** 364 12 a **1762** 372 H e  
**1763** 373 8 g **1764** 373 8 b **1766** 53, 264 5 b **1767** 53,  
260 15 g **1768-1775** 53, 266 3 c **1776** 387 D 3 a **1777**  
53, 256 34 a **1778** 53, 266 3 c **1779** 372 H e **1780** 371 9 b  
**1781** 373 12 b **1782** 373 7 a **1783** 53, 264 8 a **1784** 53,  
261 17 b **1785** 53, 260 11 c **1786-1794** 53, 266 3 c **1795**  
357 VI 2 a **1796** 287 6 d **1798** 353 4 b **1800** 378 9 a  
**1801** 53, 263 4 a **1802** 53, 264 10 l **1803** 53, 264 10 m  
**1806-1809**, **1812** 53, 266 3 c  
**1814** 385 2 **1815** 366 D 1 **1816** 381 III 7 **1817** 366 C 1  
**1818** 326 3 **1820** 381 V 1 a **1822** 381 V 1 b **1823** 270 5  
**1824** 329 3 b **1825** 59, 238 66, 247 B 1, 398 **1826** 322 E 1 a  
**1827** 382 4 b **1828** 335 8, 339 3 d **1829** 361 IX 3 **1830**  
370 G 6 b **1832** 358 5 a **1833** 377 15 **1834** 287 6 c **1839**  
351 VII 4 b **1840** 377 11 **1841** 319 I 7 b **1842** 320 10 c  
**1845** 307 3 a **1846** 363 XIII 6 **1850** 377 B II 5 **1851**  
286 III 2 a **1852** 343 F b **1855** 288 8 **1857** 377 B II 4  
**1857-1865** 398 **1859** 362 XIII 1 b **1860** 367 4 a **1861**  
260 11 d **1863** 268 19 b **1864** 381 IV 3 b **1865** 378 13 a  
**1867** 267 13 a **1873** 341 5 a  
**1875** 381 IV 9 **1876** 287 6 e **1878** 368 C 2 **1879** 350 u  
**1880** 328 21 a **1881** 263 1 a **1882** 368 C 3 a **1886** 262 27 a,  
399 **1887** 341 1 f **1889** 367 3 a **1891** 287 6 f **1894** 367 2  
**1895** 329 4 a **1896** 366 C 2 **1897** 343 G 1 b **1898** 341 1 g  
**1899** 384 9 **1901** 361 7 **1902** 353 1 a **1903** 360 10 c **1904**  
359 6 b **1908** 268 19 c **1909** 260 11 e, 398, 399 **1911**  
260 11 f **1914** 384 5 **1915** 343 F c **1916** 360 11 c **1917**  
359 6 e **1918** 353 7 a **1920** 326 11 **1921** 260 15 a, 399  
**1921-1926** 398 **1924** 260 13 b, 399 **1925** 259 5 c, 399

- 1926 263 1 b, 399 1927 262 29 b 1929 332 7 b 1931 341 1 h 1933 336 7, 366 (n, 1) 1935 263 1 c 1936 260 11 a 1939 270 1 a 1940 263 31 b 1941 359 6 d 1942 365 16 a 1943 385 II 6 a 1944 333 2 a 1945 333 2 b 1946 333 3 a 1946A 333 2 d 1947 384 6 1948 333 2 c 1949 333 1 1950 366 C 4 1950A 260 11 g
- 1951 384 10 1952 341 1 i 1953 270 1 b 1954 258 4 a 1956 353 2 a 1957 372 2 d 1958 373 7 b 1959 320 1 c 1960 302 17 b 1962 386 10 1963 372 H f 1965 355 2 a 1966 359 4 b 1968 360 14 b 1969 334 7 b 1971 347 4 a 1972 338 2 a 1973 362 XIII 2 a 1974 257 35 a 1975 360 1 a 1977 323 6 a 1978 372 H g 1979 375 p 1981 398 1982 261 20 a, 398, 399 1983 259 7 a, 398, 399 1984 398 1985 398 1986 270 3 1988 386 7 a 1990 386 7 b 1992 348 11 a 1993 380 III 1 a 1994 341 j 1996 385 1 e 1997 377 B I 1998 367 1 d 2000 262 27 c 2001 263 1 d 2005 370 F 2 2006 381 V 1 c 2007 350 VI 5 2009 319 I 6 b 2010 302 13 2011 259 8 a 2012 260 13 c 2015 373 15 c 2016 353 I 5 2017 350 V 5 a 2018 259 5 d 2019 359 4 c 2022 87, 378 10 c 2023 357 11 c
- 2024 332 7 a 2028 316 D 3 2029 387 I 3 2030 259 5 e 2032 350 V 5 b 2034 359 4 d 2035 334 1 2037 352 8 2038 354 6 2040 375 11 b 2041 380 III 2 c 2042 341 k 2044 341 l 2045 381 V 1 g 2046 55, 250 1 2047 343 F d 2048 303 28 2051 257 40 a 2052 87, 252, 254 I 2, 399 2053 270 2 a 2054 270 2 b 2056 344 4 2057 369 4 a 2058 287 6 s 2059 365 13 2061 341 m 2062 400 2063 341 n 2064 340 4 d 2065 370 F 3 a 2066 87 2067 348 6 d 2068 386 23 2069–2070 372 H g 2072 340 3 b 2074 341 o 2075 371 9 c 2076 353 4 j 2082 333 2 c 2083 332 2 a 2084 374 10 e 2088 381 IV 3 c
- 2091 249 I 1 2096 294  $\gamma$  2, 386 19 2098 373 14 a 2099 353 4 i 2103 341 p 2108 257 37 a 2109 333 3 b 2111 261 17 c 2114 333 2 f 2115 319 V a 2116 320 11 b 2117 319 I 3 b 2119 353 7 b 2120 352 4 d 2121 363 XIV 9 a 2122 258 50 a, 399 2123 358 6 a 2124 348 11 b 2125 339 I 1 b 2130 353 I 6 a 2132 359 5 2133 359 4 c 2135 320 2 a 2136 349 II 4 2137 319 I 5 c 2138 373 8 c 2139 259 8 b 2140 354 8 2141 371 9 f 2142 378 13 b 2144 334 7 c 2147 341 v 2148 342 w 2149 257 35 b 2152 372 H g 2155 319 I 3 a 2158 259 8 c 2159 287 6 g 2160 375 13 c 2161 363 XIV 9 b 2162 380 III 1 b 2165 318 I 3 c 2166 334 8 2167 356 5 a 2168 281 2 a 2169 357 11 d 2170 340 4 e 2171 329 4 b 2172 373 5 a 2173 362 XIII 3 a 2174 299 11 a 2175 373 5 b 2176 320 1 a 2177 316 D 9 2178 386 18
- 2182 352 VII 3 2183 343 G c 2184 365 15 b 2185 336 5 2189 385 I 5 2190 310 II 2, 379 V 1 2192 386 11 a 2192A 259 8 d 2193 326 2 b 2194 286 III 2 b 2195 382 1 k 2196 342 x 2200 267 12 d 2205 316 C 13 2208 316 D 2 2242 316 D 7 2244 316 C 5 2270 316 D 17 2287 316 D 15 2323 316 D 8 2344 316 D 10 2391 353 2 b 2394 343 F e 2395 373 11 b 2396 365 15 a
- 2397 358 7 2398 319 I 4 2399 320 10 b 2400 318 II 1 d 2401 319 I 7 a 2402 343 F f 2403 348 12 a 2404 372 2 c 2405 327 16 a 2406 288 9 2407 343 F g 2408 319 I 5 b 2409 282 15 2410 302 17 c 2412 343 F h 2413 343 F i 2414 360 14 c 2415 319 I 5 a 2416 373 8 d 2418 320 2 c 2419 320 8 a 2421 351 VII 5 b 2423 285 7 a 2424 285 5 2425 285 6 a 2426 288 12 c 2428 302 17 d 2429 385 4 2430 309 8 b 2431 249 2 c 2432 309 8 c, 387 II 4 2433 308 6 h 2434 297  $\gamma$  7 i 2435a 379 V 3 2436 52, 265 10 oo 2439 364 12 b 2440 349 V 2 j 2441 381 III 5 2442 329 4 c, 387 II 1
- 2443 339 2 c 2444 319 II 5 a 2445 286 III 3, 310 II 3, 316 C 15 2446 287 7 a 2447 287 7 c 2449 385 I 7 2450 302 20 a 2451 334 3 2452 329 4 d 2453 353 7 c 2454 357 10 2455 52, 263 3 a 2456 377 B II 1 2458 301 7 b 2459 288 12 a 2461 288 12 b 2462 307 a, 308 1 a 2463 297 4 a 2464 295 5 a 2465 386 21 2466 385 1 b 2470 344 H 2 a 2471 335 II 1 2472 374 11 c 2474 372 2 f 2475 371 8 d 2476 365 19 2477 355 2 b 2478 326 2 a 2479 340 3 c 2480 255 17 a 2481 52, 252, 264 6 a 2482 257 43 a 2485 52, 266 2 g 2486 254 2 a 2487 261 22 a 2488 352 4 c 2489 355 7 a 2491 308 6 c 2492 308 6 l 2493 287 7 d 2494 385 II 6 b 2495 249 I 2 2497 387 III 5 2498 387 III 1 2499 385 1 c 2500 288 15 2501–2502 295 7 a 2503 374 4 2505 336 6 c 2506 336 4 b 2507 350 VI 2 a 2508 350 k
- 2509 350 l 2510 352 9 2511 347 6 c 2512 352 2 2513 358 3 a 2514 363 XIV 9 c 2515 353 1 b 2516 350 m 2517 52, 264 10 n 2518 255 12 a 2519 349 IV 2 c 2520 308 3 2521 308 6 b 2522 308 6 a 2523 309 10 2524 387 III 3 2526 383 II 2 2527 340 1 a 2528 342 y 2529 343 G d 2530 318 II 2 2531 339 3 e 2532 348 12 b 2533 353 4 c 2534 366 XV 3 2535 360 14 d 2536 359 4 f 2537 355 3 b 2538 367 5 b 2539 351 VII 1 2540 351 VII 4 c 2541 350 VI 6 2542 352 6 2545 307 a, 308 5 o 2546 299 11 b 2547 258 2 b, 400 2548 337 IV a 2549 336 6 a 2550 355 2 c 2551 359 4 g 2552 350 n 2553 349 III 1 b 2554 353 3 a
- 2556 329 1 2558 386 24 2559 309 9 a 2560 297  $\delta$  8 a 2561 52, 261 21 a 2562 53 2564 53, 262 27 b 2564a 368 6 b 2565 53, 265 14 a 2566 53, 266 3 c 2566a 373 11 c 2567 53, 262 28 a 2570 53, 261 19 a 2570a 303 30 2571 353 3 b 2572 356 5 b 2573 356 5 c 2574 365 14 2575 350 o 2576 362 XI 2 2577 308 2 2578 385 1 a 2580 334 4 a 2581 387 D 2 b 2582 294  $\beta$  6 2585 301 8 2586 355 4 b 2587 355 7 b 2588 367 1 c 2589 350 p 2591 380 II 1 c 2592 382 1 h 2593 343 F j 2594 334 7 d 2595 304 II c
- 2596 355 8 2597 364 9 d 2598 294  $\beta$  5 2599 286 8 2600 333 2 g 2601 279 26 b, 317 1 b 2602 385 9 c 2603 385 10 a 2604 281 1 a 2605 321 6 2607 342 bb 2609 360 10 d 2610 356 3 2612 385 9 a 2613 271 19 2614 259 8 f 2619 398 2621 267 14 a 2622–2641 398 2643 259 7 b 2646 272 22 a 2647 271 20 2648 271 21 a 2649 270 4 2650 267 9 b 2654 271 21 b 2655 263 1 q 2659 272 22 b 2660 267 15 d 2663 266 2 b 2664 265 12 b 2670 259 9 c 2672 263 1 c 2673 255 14 a 2674 266 4 b 2678 256 28 b 2680 257 35 f 2681 259 5 f 2682 259 5 g 2683 258 47 a 2688 256 23 a, 400 2689 260 10 c, 400 2691 75 2693 75, 259 9 d 2694 76, 258 48 a 2695 75, 263 32 a 2696 259 9 b 2697 259 5 h 2699 260 10 f 2704 263 1 o 2705 263 1 p 2706 265 12 n 2707 75, 256 29 a 2709 75, 256 34 b 2710 76, 263 2 a 2711 264 10 o 2719 316 E 4 2720 316 D 16 2726–2727 355 9 2728 357 13 a 2729 359 2 2731 352 4 b 2734 352 3 2735 358 3 b 2736 360 14 c 2737 358 3 c 2742 357 11 c 2743 357 VII 2 c 2744 355 5 b 2745 350 q 2746 357 4 2748 351 VIII 5 2750 361 5, 366 D 2 2751 366 C 3 2752 374 17 a 2754 374 16 c
- 2755 370 G 5 2756 374 10 f 2757 372 H h 2758 375 12 2759 380 II 1 a 2762 329 4 c 2763 381 V 1 d 2766 382 4 c 2768 380 III 1 c 2769 380 II 1 f 2770 381 III 4 a 2774 377 B II 6 2775 329 2 a 2776 381 III 8 b 2777 342 cc 2778 342 dd 2779 341 q 2780 341 r 2781 342 z 2782 342 aa 2784 341 s 2785 341 t 2786 287 6 h 2787 304 II a 2788 306 2 2789 376 5 a 2790 386 22 a 2791

- 385 8 2792 386 11 b 2793 385 9 b 2794 294 11 a  
 2795-2796 325 VIII b 2798 339 II 3 2799 335 III 2 a  
 2800 336 6 f 2802 260 12 a 2803 386 11 c 2806 260 12 b,  
 400 2807 259 9 a, 400 2808 260 12 c 2809 366 D 6,  
 378 III 4 2810 377 12 2811-3108 393 2816 340 1 b  
 2825 308 1 b 2827 280 4 2828 279 29 a, 318 A 3 a 2829  
 280 11 a 2831 379 5 2832 376 II 3 2835 288 12 d 2836  
 327 15 2839 335 III 2 b 2840 342 ee 2841 288 12 e  
 2842 309 8 d 2843 309 8 c
- 2844 329 9 a 2846 372 2 g 2849 353 9 2851 308 4 2852  
 340 3 d 2954 238 64, 281 18 2856 348 11 c 2857 299 9 b  
 2858 280 5 2859 287 6 i 2860 335 7 2862 374 5 2863  
 360 10 e 2864 352 7 2866 356 5 d 2867 373 11 d 2869  
 306 4 e 2870 309 8 f 2871 303 23 2873 279 27 a, 318 4 a  
 2874 342 ff 2877 385 10 b 2879 343 G e 2880 349 V 1 e  
 2881 360 1 b 2882 328 21 e 2883 287 7 e 2884 384 B 4  
 2886 318 II 1 e 2887 372 H m 2888 288 12 f 2889  
 355 4 e 2892 294 11 b 2894 343 G f 2895 287 6 j 2896  
 343 G 2 a 2897 356 6 2898 374 2 2899 356 9 2900  
 370 G 1 a 2902 362 XIII 3 b
- 2903 283 22 2904 358 12 2906 321 IV 3 2907 319 I 7 d  
 2908 334 4 b 2909 283 21 2910 320 2 f 2911 360 10 f  
 2912 280 6 2914 287 6 a, 406 2916 354 9 e 2917 354 9 d  
 2918 372 H m 2919 287 7 f 2920 350 r 2921 343 G g  
 2923 316 C 7 2924 334 4 f 2925 247 B 2, 378 IV 1, 406  
 2926 347 3 a 2927 361 9 2928 355 4 d 2930 355 6 2931  
 343 F k 2933 356 5 e 2934 338 1 2935-2936 372 H m  
 2937 345 J 2 b 2939 380 I 5 2940 348 9 2942 381 IV 3 d  
 2943 381 IV 2 b 2944 374 3 2948 340 1 e 2949 343 G h  
 2950 343 G i
- 2951 370 F 1 a 2952 357 11 f 2953 318 I 3 b 2954  
 329 8 2955 357 VII 1 2956 381 III 6 2957 288 7 g  
 2958 336 3 2959 343 G j 2960 370 F 1 b 2961 370 F 1 c  
 2962 343 G k 2963 343 G l 2964 287 6 k 2965 348 11 d  
 2966 349 IV 3 2967 357 11 g 2968 385 16 2969 341 5 b  
 2970 294 a 6 2971 356 5 f 2972 357 11 h 2973 354 9 b  
 2974 342 gg 2975 334 4 h 2979 354 2 2980 288 7 h  
 2981 287 6 l 2982 286 9 2983 288 12 g 2984 279 27 b  
 2985 353 II 6 2986 340 1 d 2988-2992 283 24 2993  
 385 II 5 2996 342 ii 2997 342 hh 2998 366 D 7,  
 378 III 5 2999 343 F 1 3000 339 II 2 3001 272 26  
 3002 375 13 b 3003 360 14 f 3004 356 7
- 3007 353 II 5 a 3008 329 7 3010 360 10 g 3011 359 4 h  
 3012 350 v 3013 380 III 2 a 3014 349 IV 2 a 3016  
 349 III 2 a 3017 377 B II 3, 406 3018 370 F 1 d 3019  
 357 11 i 3020 288 12 j 3021 349 IV 1 a 3024 265 12 e,  
 406 3025 334 4 i 3027 307 5 a 3028 378 IV 2 3029  
 294 γ 1 a 3031 342 jj 3034 367 1 e 3035 372 H m  
 3037 286 5 e 3038 287 6 m 3039 357 11 j 3040 354 9 a  
 3041 373 4 b 3042 372 H m 3043 287 6 n 3044 288 10 a  
 3046 372 H m 3048 288 12 h 3049-3050 372 H m  
 3051 280 14 3052 288 12 i 3053 294 β 2 3054 342 kk  
 3055 341 5 e 3056 363 XIII 3 e 3057 382 VII 3058  
 380 III 2 b 3059 334 7 e 3061 382 4 d 3062 331 III 8  
 3063 322 E 1 f 3064 297 11 3065 272 7 3066 370 F 3 b  
 3069 372 H m 3072 378 8 a 3073 356 4 3074 353 II 5 b  
 3076 336 4 e 3077 306 6 h 3078 383 II 3 3081 377 B II 7  
 3082 53, 265 12 d 3083 267 10 a 3084 297 4 b 3085  
 52, 261 20 b 3086 358 8 3087 303 33 3090 336 2 e  
 3091 336 2 d 3092 386 16 3094 372 H m 3095 340 3 e  
 3097 358 3 d 3098 375 m 3099 249 2 f 3100 354 5  
 3102 349 III 2 b 3103 294 α 5 b, 306 12 3104 308 1 e  
 3105 256 25 a, 406 3106 339 2 d 3107 339 2 e 3108  
 287 6 o 3112-3115 53, 266 3 d 3119 52, 257 44 b
- 3120 52, 264 10 p 3123 370 E b 3124 306 7 e 3125  
 273 5 3126 362 XIII 2 b 3127 309 9 b
- 3128 367 3 d 3129 304 2 k 3130 332 6 a 3132 363 XIII 4  
 3134 316 C 9 3140 303 24 3141 319 I 6 a 3142 343 F 2  
 3143 250 m, 306 18 a 3144 76, 262 30 a 3145 76,  
 259 9 e 3146 359 4 i 3147 350 s 3152 76, 263 1 f 3153  
 302 20 b 3154 307 4 a 3159 319 V b 3160 302 15 a  
 3161 342 ll 3162 287 6 p 3165 307 a, 308 5 k 3166  
 386 12 b 3167 342 mm 3168 375 11 h 3169 287 6 q  
 3170 320 12 b 3171 375 11 i 3172 336 6 b 3173 306 10 c  
 3174 342 oo 3175 337 IV b 3177 373 13 3178 76,  
 257 39 a 3185 320 2 g 3186 302 20 e 3191 76, 260 10 g  
 3193 76, 263 1 g 3194 76, 261 18 a 3200 334 7 f 3202  
 342 pp 3203 344 H 1 b 3204 258 2 a 3205 250 2 3211  
 387 14 3212 306 18 b 3213 372 H k 3214 370 G 3  
 3216 372 H k 3218 373 14 b 3225 262 29 a 3226  
 319 I 1 3228 76, 347 4 b 3229 387 II 3 3230 320 8 b  
 3241 316 B 18 3245 368 C 3 b 3247 76, 263 1 h 3248  
 76, 259 9 f 3249 374 8 a 3250 249 1 b, 297 4 c 3251  
 319 III 2 a 3252 386 15 3253 308 6 e 3254 340 3 f  
 3255 371 9 d 3266 368 C 3 e 3268 365 24 3269 307 a,  
 308 5 a 3270 306 1 3271 307 4 b 3275 260 15 h 3277  
 320 10 d 3283 311 3286 302 20 e 3287 343 F n
- 3288 375 13 a 3289 76, 346 1 b 3290 77, 271 8 3292  
 303 22 3294 358 9 3295 360 10 h 3296 377 14 3297  
 75, 264 7 a 3298 319 I 7 e 3299 358 3 e 3300 77, 271 7  
 3301 272 4 3308 285 1 e, 310 II 4, 316 D 13, 379 V 4  
 3312 301 7 e 3315 257 35 e 3317 342 qq 3318 76,  
 384 3 e 3320 370 D 2 3321 381 IV 7 3322 336 4 d  
 3323 375 11 j 3324 363 XIV 5 3327 272 25 3328  
 272 23 3332 76, 368 B 1 b 3333 76, 385 II 6 e 3334  
 369 3 d 3335 320 2 b 3336 378 12 a 3337 280 7 3340  
 336 6 e 3347 318 I 3 a 3349 321 IV 2 3351 364 9 e  
 3352 373 6 a 3354 250 k 3357 259 8 g 3360 76, 262 27 d  
 3364 271 9 3365 316 B 15 3367 381 V 1 e 3369 294 β 4,  
 297 9 e 3372 320 2 e 3373 367 4 e 3374 380 II 3 a  
 3375 386 17 3378 286 4 3380 373 10 b 3381 308 5 e  
 3383 359 3 d 3384 263 1 i 3389 265 13 a 3390 359 4 j  
 3391 372 1 e 3392 326 12 a 3393 254 4 a 3394 263 1 j  
 3395 336 6 g 3396 385 II 6 d 3397 285 4 3398 386 1 b  
 3400 294 β 1 3401 316 D 11 3405 264 10 q
- 3406 372 H k 3407 343 G 2 b, 380 6 e 3410 302 17 e  
 3411 319 IV 1 3412 297 6 a 3416 341 4 f 3418 264 10 r  
 3419 335 II 3 3420 255 19 a 3422 320 2 d 3423 321 II 4 g  
 3428 336 6 h 3429 319 V e 3431 283 23 3432 377 16,  
 378 10 d 3433 386 9 3435 342 nn 3437 308 6 k 3439  
 328 21 b 3440 370 G 2 a 3441 357 VI 3 3442 259 8 h  
 3444 281 15 3448 278 20 e 3450 277 12 a 3451 288 13 a  
 3453 280 11 d 3454 280 11 e 3457 316 D 6 3458  
 356 8, 379 I 3 a 3459 286 5 a 3460 353 4 k 3463 365 16 b  
 3464 372 H k 3465 323 5 b 3466 322 E 1 b 3467  
 322 IV 1 b 3468 322 E 2 e 3469 323 5 e 3470 323 5 e  
 3471+, 3472+ 322 E 1 e 3476 367 4 d 3477 341 u  
 3478 372 3 b 3479 373 11 e 3481 373 15 d 3482  
 351 VIII 4 3483 351 VIII 3 3484 350 w 3485 350 V 3 e  
 3486 285 3 3490 334 5 3491 322 E 1 g 3492 322 E 1 h  
 3493 334 7 g 3494 309 8 g 3495 373 15 e 3496 270 6  
 3498 373 15 f 3499 372 3 e 3502 360 8
- 3503 347 3 b 3504 350 V 5 e 3506 373 11 f 3508 277 11  
 3509 372 H i 3510 373 6 b 3511 268 19 d 3512 255 21 a  
 3513 355 4 e 3514 365 16 e 3526 251 3 3527 379 I 3 d  
 3528 250 1 3531 286 5 b 3538 316 C 6 3540 307 a,  
 308 5 b 3544 353 7 e 3545 279 29 b, 318 A 3 b, 318 4 b  
 3546 316 D 12 3550 316 C 3 3551 373 4 a 3553 264 10 s

- 3557** 369 3 e **3558** 379 I 3 a **3559** 265 14 b **3561** 380 II 3 b **3565** 382 1 i **3566** 308 6 m **3567** 316 C 2  
**3569** 260 15 i **3570** 370 E c **3571** 263 1 n **3578** 251 2  
**3579** 342 rr **3580** 339 I 1 e **3581** 359 1 **3585** 320 1 d  
**3586** 377 13 **3587** 360 10 i **3589** 348 7 **3590** 382 2 a  
**3591** 326 8 **3592** 377 B II 2 **3593** 376 II 4 **3596** 287 6 r  
**3598** 366 XV 5 **3601** 271 10 **3603** 355 3 e **3604** 339 2 f  
**3605** 255 9 b **3606** 262 26 b **3607** 264 10 t **3609** 255 9 a  
**3611** 358 5 b **3613** 334 7 h **3614** 250 5, 338 2 e  
  
**3615** 342 ss **3620** 271 11 **3622** 304<sup>1</sup> **3623** 265 10 u  
**3624** 265 10 v **3626** 255 22 a **3630** 316 D 14 **3632** 375 k  
**3633** 378 12 b **3635** 316 C 12 **3636** 339 2 h **3638** 250 6, 367 7 **3639** 377 A 8 **3641** 374 17 b **3642** 336 6 i  
**3644** 258 2 e **3645** 76, 262 30 b **3646** 267 9 g **3647** 271 12 **3648** 353 4 n **3650** 316 C 14 **3652** 52, 253, 261 23 a **3653** 52, 253, 265 10 w **3654** 52, 253, 264 10 e  
**3655** 52, 253, 264 10 c **3656** 52, 253, 264 10 f **3657** 52, 253, 264 10 g **3658** 52, 253, 265 10 x **3659** 52, 253, 265 10 y **3660** 52, 253, 265 10 z **3661** 52, 253, 265 10 aa  
**3662** 52, 253, 264 10 a **3663** 52, 253, 265 10 bb **3664** 52, 253, 265 10 cc **3665** 52, 253, 265 10 dd **3666** 52, 253, 265 10 ee **3667** 52, 253, 265 10 ff **3668** 52, 253, 265 10 gg  
**3669** 52, 253, 265 10 hh **3670** 52, 253, 264 10 b **3671** 52, 253, 265 10 ii **3672** 52, 253, 265 10 jj **3673** 52, 253, 265 10 kk **3674** 52, 253, 265 10 ll **3675** 75, 260 15 b  
**3676** 346 1 e **3677** 380 I 6 b **3678** 351 VIII 1 **3679** 380 II 3 c **3680** 267 16 a **3681** 374 10 c **3686** 357 12 b  
**3690** 259 7 c **3691** 254 7 a **3693** 266 15 a **3694** 347 3 e **3695** 316 D 5 **3696** 316 B 17 **3699** 349 IV 2 b **3700** 259 5 i **3701** 75, 254 3 a **3702** 342 2 a **3703** 335 6  
**3704** 376 II 1, 401 **3705** 368 C 1 **3706** 277 10 **3707** 277 13 b **3708** 75, 257 44 a **3709** 279 26 a, 317 1 a  
**3710** 378 11 **3712** 81, 262 27 f **3714** 367 10 **3715** 63, 377 A 9 **3716** 82, 271 13 a **3717** 381 IV 5 **3725** 357 13 b **3726** 343 F m **3727** 280 13 a **3728** 280 12  
**3729** 277 14 e **3729a** 280 13 b **3730** 320 1 b **3731** 75, 267 9 c **3732** 80, 257 36 a **3734** 80, 257 36 b **3735** 81, 323 5 d **3736** 277 14 a **3736b** 382 1 m **3737** 277 9 a  
**3738** 277 8 b **3739** 277 14 b **3740** 277 8 a **3741** 277 9 b **3745** 81, 259 8 i **3746** 368 B 2 a **3747** 368 B 2 b **3748** 342 vv **3749** 379 I 3 b **3751** 277 14 k **3753** 322 E 1 i  
**3754** 322 E 2 a **3758** 342 ai **3772** 382 5 e **3773** 382 5 b **3775** 322 E 2 b **3779** 319 V d **3780** 376 I 4 **3781** 342 ww  
**3785** 258 46 a **3792** 322 III 1 b **3793** 322 E 1 d **3796** 342 aj **3797** 342 ak **3798** 265 10 mm **3800** 353 4 m  
**3801** 348 6 a **3802** 357 VI 1 **3803** 342 tt  
  
**3810** 379 6 **3816** 348 6 b **3817** 349 IV 1 b **3818** 360 6 e  
**3821** 321 II 4 b **3822** 81, 266 6 a, 403 **3823** 321 II 4 c  
**3826** 257 35 d **3827** 272 5 **3828** 75, 81, 265 12 e **3830** 75, 81, 260 10 b **3831** 382 3 b **3832** 357 VI 2 b **3833** 353 6 b **3840** 343 F t **3841** 278 16 **3842** 277 13 a **3843** 277 14 d **3844** 277 14 e **3845** 277 14 f **3846** 277 14 g  
**3848** 373 8 e **3849** 277 4 a **3850** 264 6 b **3851** 321 II 4 d  
**3854** 306 7 f **3855** 233 4, 277 14 d, 393 **3857** 321 II 4 e  
**3858** 385 16 **3859** 249 I 4 **3860** 278 20 a **3861** 301 3  
**3862** 63, 368 A 2, 401 **3863** 233 5, 277 14 d, 401 **3864** 238 61, 276 2 a, 401 **3865** + 234 24, 401 **3866** + 234 24, 401  
**3867** 236 44, 401 **3868** 246, 401 **3869** 346 1 d **3871** 297 (4) j **3873** 235 26, 281 16 **3874** 246 **3875** 236 43 **3876**–81 246 **3882** 384 1 **3885** 326 1 a, 401  
**3886** 320 8 c **3887** 386 12 a **3889** 234 21, 277 3 a **3890** 237 53 **3891** 234 16 a, 277 3 a **3892**–3 246 **3894** 234 17 a, 277 3 a **3895** 235 31 a **3896** 236 45 **3897** + 237 48 **3898** 234 16 b, 277 3 b **3899** 234 17 b, 277 3 b  
**3900** 235 30 **3901** 246 **3902** + 236 36, 277 7 a **3903** + 236 34, 277 7 d **3904**–5 246 **3906** + 236 36, 277 7 a  
**3907**–8 246 **3909** 235 33, 277 7 b **3910**–12 246 **3913** + 236 35 **3914** + 236 35 **3915** 237 46 **3916** 235 32, 276 2 b **3917** 234 23, 276 2 c **3918** 336 2 e **3920** 323 6 b  
**3921** 322 E 3 **3922** 381 IV 1 **3923** 373 15 g  
**3924** 343 G p **3925** 372 H j **3926** 378 10 a **3927** 260 12 d  
**3928** 337 V 1 **3929** 379 I 2 a **3930** 246, 382 11 **3931** 234 18, 277 3 e **3932** 234 22, 277 7 c **3933** + 236 34, 277 7 d **3934** 238 62, 276 2 d **3935** 246 **3936** 373 11 g  
**3937**–**3938** 373 15 g **3939** 373 11 h **3940**–**3942** 373 15 g  
**3943** 373 11 i **3945** 373 15 g **3946** 302 16 a **3947** 322 E 1 j **3950** 347 3 d **3951** 342 uu **3953** 345 6 **3956** 373 15 h **3957** 233 8 **3958** 246 **3960** 384 2 b **3961** 339 2 g **3962** 286 12 **3964** 259 5 m **3965** 276 1 b, 310 I 2 **3967** 255 10 a **3968** 331 III 3 **3969** 341 4 f  
**3971** 369 5 b **3972** 373 15 g **3973**–**3978** 299 1 b **3979** 301 10 **3980** 377 A 5 **3981** 260 15 e **3982** 301 2 c  
**3983** 299 1 b **3984** 268 19 e **3985** 380 I 6 a **3986** 374 9  
**3990** 237 48–49 **3991** 238 63, 276 2 e **3992** 235 31 b  
**3993** 236 38, 277 14 h **3994** 236 42 **3995** 234 20, 277 3 d  
**3996** 246 **3997** 233 6 **3998**–**4000** 246 **4001** 82, 139, 383 II 1 **4002** 81, 264 10 d **4003** 81, 258 3 a **4005** 362 XI 3 **4008** 353 6 e **4010** 358 10 **4011** 316 C 1  
**4012** 379 I 2 b **4013** 345 J 1 **4014** 359 4 k **4015** 338 4  
**4024** 311bis **4030** + 233 13, 277 3 e  
**4031** 234 19, 277 3 f **4032** + 233 13, 277 3 e **4033**–**38** 246 **4039** 372 H j **4040** 246 **4043** 318 II 5 b **4044** 311  
**4049** 277 12 b **4053** 82, 257 35 e **4055** 366 D 4 **4060** 340 3 g **4062** 320 12 a **4065** 385 11 **4066**–**4071** 344 I 1  
**4073** 84, 271 16 **4074** 347 5 a **4075** 232 1, 277 14 i  
**4076**–**8** 246 **4079** + 235 25 **4080** + 235 25 **4081**–**4** 246  
**4086** 379 3 e **4087** 308 6 j **4092** 372 H 1 **4093** 316 C 8  
**4098** 311 **4099** 301 12 d **4103** 322 E 1 e **4106** 247 C 1, 334 6 **4107** 81, 376 5 b **4109** 79, 81, 262 26 a **4110** 84, 271 17 a **4112** 278 17 **4113** 279 22 **4114** 302 17 f  
**4115** 342 xx **4116** 278 18 c **4117** 278 18 b **4120** 84, 266 6 b **4125** 368 A 1 **4126** 385 12 **4127** 378 12 c  
**4128** 385 1 d **4129** 84, 263 1 k **4130** 386 13 **4132** 340 3 h  
**4133** 344 H 1 c **4143** 84, 265 10 nn **4144** 84, 266 1 a  
**4145** 369 4 b **4146** 361 1 b **4147** 385 II 6 e **4149** 322 III 2 **4150** 362 XII 2 a **4151** 386 1 a **4152** 321 II 4 f  
**4153** 362 XI 1, 365 22 **4154** 81, 260 10 e **4155** 81, 266 6 e **4156** 301 7 d **4157** 301 2 d **4158** 365 18 **4162** 342 2 b **4163** 342 af **4164** 84, 266 4 a **4165** 320 10 e  
**4166**–**4167** 301 2 d **4168** 353 41 **4169** 301 6 **4170** 301 2 d **4171** 237 54, 277 3 g **4172** 84, 265 12 f **4173** 353 4 g **4174** 316 B 16 **4175** 286 11 **4176** 271 17 b  
**4189** 323 6 e **4190** 374 10 g **4191** 259 9 g **4197** 334 2  
**4198** 349 V 1 b **4199** 373 9 e **4202** 331 III 7 **4204** 318 II 1 e **4205** 343 F o **4206** 323 6 d **4207** 369 5 d  
**4208** 372 I 3 d  
**4276** 267 8 a **4285** 264 9 a **4287** 267 9 d **4289** 342 am  
**4290** 374 8 b **4291** 372 2 h **4292** 372 3 e **4293** 373 15 i  
**4294** 378 7 **4295** 377 A 6 **4296** 84, 363 XIV 1 **4297** 350 t **4304** 260 10 h **4350** 326 4 **4351** 342 an **4352** 342 ao **4353** 373 15 i **4354** 373 11 j **4357** 371 8 e  
**4359** 281 6 b **4360** 334 4 e **4382** 318 II 3 **4383** 335 III 1  
**4385** 323 6 e **4386** 302 15 b **4387** 360 11 d **4388** 304 II b  
**4389** 380 II 4 b **4390** 343 F p **4391** 343 F q **4392** 316 E 1 **4393** 342 ae **4394** 306 5 e **4395** 343 G m  
**4396** 365 20 **4397** 303 21 **4399** 350 VI 2 b **4400** 348 1  
**4401** 279 30, 318 6 **4402** 376 I 2 a **4403** 301 2 e **4404** 363 XIV 7 **4405** 303 27 b **4406** 84, 348 2 **4408** 319 III 1  
**4409** 321 III 1 **4410** 321 II 3 a **4411** 321 II 3 b **4412** 321 5 **4413** 319 V e **4414** 358 4 **4415** 367 6 **4441**



- 348 8 a 4442 340 3 i 4443 332 2 b 4444 342 yy 4445  
 348 8 b 4446 319 III 2 b 4447 357 13 e 4448 384 A 4  
 4451 347 4 d 4453 345 I 2 b 4454 343 Fr 4455 295 3 c  
 4456 342 ap 4457 370 G 2 b 4458 353 8 4459 373 9 d  
 4460 381 IV 10 4463 375 n 4464 281 20 4465 318 II 1 a  
 4466 318 II 1 b 4467 343 Gn 4468 343 Go 4469  
 386 6 f 4471 380 III 3 4472 320 2 h 4475 250 4 4476  
 381 III 8 e 4477 355 3 d 4479 337 V 3 4480 342 al  
 4484 341 4 g 4486 363 XIV 4 4489 382 2 b 4490  
 345 I 2 e 4491 337 V 2 4492 320 9 4493 362 XII 2 b  
 4496 378 IV 4 4499 338 2 b 4501 326 5 4506 249 I 5  
 4507 316 E 3 4509 339 II 1 b 4513 361 5 a 4514  
 372 1 e 4515 348 10 4517 353 1 e 4518 345 I 3 4519  
 341 6 4520 373 8 f 4522 369 5 e 4523 287 6 b 4524  
 233 9 4525 233 12, 277 14 l 4526 233 11 4527 236 40,  
 278 18 a 4528 351 VII 4 d 4529 366 XV 2 4530 367 8  
 4531 370 G 4 4532 380 I 4 4533 354 10 4534 345 I 3  
 4535 282 16 a 4536 282 16 b 4537 376 5 e 4538 353 4 o  
 4539 342 ab 4543 353 3 e 4544 370 G 1 b 4545 376 I 3  
 4546 386 22 b 4547 386 6 g 4548 386 6 h 4549 386 6 i  
 4550 236 41 4551 236 37 4552 235 28 4553 235 27  
 4554 238 58 4554a 81 4555++ 235 29, 278 15 a  
 4556++ 235 29, 278 15 a 4557 246 4558 374 10 d  
 4559 370 7 b 4560 342 ag 4561 375 o 4563 281 3 b  
 4564 370 G 2 e 4566 250 i 4567 342 ac 4568 353 6 d  
 4569 371 9 e 4570 386 7 e 4571 387 II 2 4573 386 8  
 4574 353 6 e 4578 233 7 4579++ 235 29, 278 15 a  
 4580 233 10, 278 14 m 4581 238 59, 276 2 f 4582  
 237 57, 277 3 h 4583 233 2, 276 2 g 4584 246 4585  
 352 1 4587 249 1 a 4590 326 7 4591 316 C 11 4592  
 350 VI 1 4594 81, 377 A 10 4595 360 14 g 4597 361 8  
 4600 372 1 d 4601 281 2 b 4602 301 12 b 4603 386 6 j  
 4604 366 XV 1 4605 326 9 4606 334 4 d 4607 234 15  
 4608 234 14 4609 246 4610 344 H 1 a 4611 332 8  
 4612 374 1 4613 380 II 1 b 4614 233 3, 278 14 o  
 4615 246 4616 237 47 4617 237 56, 280 11 f 4618  
 342 zz 4619 236 39, 278 19 a 4620 81, 385 14 4621  
 81, 334 4 j 4622 81, 326 7 4624 281 2 e 4625 281 3 a  
 4626 386 20 4627 238 60, 278 15 b 4628 246 4629  
 237 52, 278 14 n 4630 237 50, 278 20 b 4631 355 4 f  
 4632 81, 376 I 2 b 4633 357 5 4634 354 7 4635 366 C 7,  
 377 17 & III 1, 404 4636 83, 257 38 b 4637 82, 256 28 a  
 4638 340 2 4640 267 11 b 4641 268 19 f 4642 263 11  
 4643 83, 256 33 a 4644 83, 255 15 a 4647 83, 265 12 g  
 4648 80, 265 12 h 4650 83, 256 24 a 4651 83, 260 15 d  
 4652 260 12 e 4653 81, 267 9 e 4654 83, 266 2 f 4655  
 261 24 a 4656 259 8 j 4657 260 14 a 4658 332 3 a  
 4659 318 5 4660 237 55, 277 3 i, 394 4661 237 51, 394  
 4665 316 D 4 4666 385 13 4667 353 1 d 4668 268 19 g  
 4669 268 18 a 4670 355 1 4671 382 1 j 4672 380 II 1 e  
 4673 362 XIII 1 a 4674 370 F 1 e 4675 249 2 h 4678  
 250 j 4679 384 2 a 4680 357 VII 2 d  
 4681 249 2 g 4682 370 D 1 4683 249 2 b 4684 339 3 f  
 4685 281 3 e 4686 250 o 4691 322 D 1 4692 343 F s  
 4693 363 XIV 8 4701 360 14 h 4702 357 13 d 4705  
 374 6 4709 361 10 4710 84 4711 256 32 a 4712 259 5 j  
 4713 265 11 a 4714 259 9 h 4716 260 15 e 4717 84,  
 260 15 j 4718 256 31 a 4719 249 2 d 4720 249 2 c  
 4722 364 11 4723 378 III 3 4724 378 9 b 4725 380 II 1 d  
 4726 342 ad 4727 378 IV 3 4728 363 XIII 5 4729  
 372 H 1 4730 196 1 4731 56, 89, 197 2, 250 3 4733  
 355 4 g 4734 329 4 f 4735 307 γ 4736 365 21 4737  
 329 5 4740 250 n 4741 386 6 k 4742 387 III 4 4743  
 83, 254 8 a 4744 83, 263 1 r 4745 82 4746 53, 265 12 i  
 4747 53, 265 12 j 4748 271 13 b 4749 82, 262 25 a  
 4750 267 12 b 4751 81, 254 5 a 4752 89, 266 3 f 4753  
 82, 265 12 k 4755 84, 271 18 a 4756 84, 271 18 b  
 4757 256 27 a 4758 89, 271 15 4759 89 4760 262 29 c  
 4766 386 6 l 4767 372 2 i 4769 52, 265 12 l 4770 86,  
 266 5 e 4771 374 7 4773 367 9 4778 360 6 f 4780  
 316 C 4 4782 384 3 a 4784 322 IV 1 a 4786 350 VI 2 c  
 4789 89, 259 9 i 4790 353 4 f 4791 89, 266 5 d 4793  
 89, 271 14 4794 86, 259 9 j 4799 360 6 g 4802 354 4  
 4804 286 10 4805 286 II 2 4806 319 I 6 e 4807 85,  
 302 17 g 4808 85, 366 C 6 4809 81, 264 5 e 4810  
 256 31 b 4812 89, 267 12 e 4814 267 17 a 4815 259 6 a  
 4816 260 15 f 4817 83, 259 5 k 4818 52, 260 11 b  
 4819 52, 257 42 a 4820 258 45 a 4821 84, 262 29 d  
 4823 385 15 4824 375 l 4826 255 16 a 4827 259 9 k  
 4828 259 9 l 4829 254 6 a 4832 302 19 4834 319 III 2 c  
 4835 386 14 4836 352 4 e 4837 52, 265 12 m 4838  
 85, 262 27 g 4839 52, 266 3 e 4840 342 ah 4841 347 5 e  
 4842 358 11 4847 316 E 5 4850 302 14 a 4851 286 II 1  
 4852 378 8 b 4854 316 C 10 4855 363 XIV 6 4856  
 366 D 3 4857 85, 376 II 2 4858 377 A 7 4859 345 5  
 4860 347 4 e 4861 345 I 2 d 4862 249 I 8, 326 6 4863  
 322 E 4 4867 85, 256 30 a 4868 386 2 4869 366 C 5  
 4870 85, 255 11 a 4871 256 26 a 4872 301 12 e 4874  
 85, 252, 254 II 1 4875 267 9 f 4876 272 24 a  
 4877 267 15 a 4878 272 24 b 4879 272 6 4880 82,  
 258 4 b 4884 262 28 b 4889 316 D 1 4893 373 14 e  
 4894 372 2 j 4895 281 2 d 4897 384 3 b 4898 357 VII 2 e  
 4899 311 4901 381 IV 6 4902 86, 316 E 2 4907 306 7 g  
 4908 307 3 b 4909 303 29 4910 386 6 m 4912 259 8 k  
 4913 263 1 m 4914 386 6 n 4915 386 6 o 4916 249 2 a  
 4917 364 12 e 4918 385 3 4919 386 6 p 4920 260 13 a  
 4921 364 9 f 4923 372 2 k 4924 347 5 b 4925 85,  
 238 65, 280 11 e 4926 328 21 e 4927 360 10 j 4928  
 256 31 e 4929 377 III 2 4934 386 6 q.

## INDEX II

### REFERENCES TO NUMBERS OF DISCARDED OBJECTS

The explanation on page 409 applies to this Index also after substituting "Discard" for "Registration."

5 318 II 1 f 6 325 VIII j 12 331 12 a 13 331 II 4 a 14 330 2 e 17 297 δ 8 f 18 280 8 19 297 7 22 294 11 d 23 299 9 h 30 276 2 h 31 302 12 g 33 288 7 i 39 279 23 b 41 276 1 f 61 282 18 64 277 δ 8 g 65 306 6 e 66 282 19 75 301 2 f 77 299 1 d 78 276 1 e 79 306 6 d 83 293 3 a 92 281 21 b 93 282 11 b 99 293 4 h 101 290 10 e 104 302 12 h 107 306 6 e 123 288 7 m 127 294 α 5 c 128 294 11 e 129 307 a, 308 5 l 130 288 12 k 135 327 16 b 136 307 b, 309 8 h 142 299 1 e 144 309 8 i 148 331 II 7 b 153 281 21 e 156 293 4 a 167 331 II 6 b 171 307 a 171a 308 5 d 172 307 a b d 172b 308 5 e 174a 309 6 p 174b 307 e 174c 307 e, 308 6 n 174d 308 5 n 176 307 a, 308 1 e 177 331 II 10 b 179 297 4 e 185 307 a 188 295 7 b 189 308 1 d & 5 m 190 331 II 9 a 194 309 9 c 200 307 f 200a 308 5 g 200b 308 5 h 201 294 γ 1 b 202 295 3 a 206 288 7 l 218 302 20 d 226 294 9 c 227 327 19 b 229 297 9 230 327 19 e 233 293 4 b 234 332 3 e 238 288 11 e 240 326 12 b 243 277 4 b 244 297 4 h 246 307 b, 309 8 j 247 309 8 k 254 307 a, 308 5 j 254b 307 b 260 293 4 e 262 297 δ 8 e 265 297 4 i 276 326 12 d 277 302 12 f 278 302 14 b 279 302 12 f 285 306 11 e 287 302 12 f 293 331 II 9 b 299 327 14 a 301 331 II 9 c 305 327 17 a 316 301 11 320 380 II 1 g 323 295 6 324 288 10 b 325 297 2 b 328 295 7 e 329 327 13 331 306 16 a 333 327 20 d 336 279 23 a 338 288 7 k 342 277 6 345 277 5 351 293 4 d 372 294 9 b 376 306 11 d 379 277 14 j 380 278 19 b, 330 1 b 382 281 17 393 294 11 f 395 280 3 396 250 y 398 282 13 399 283 26 400 288 12 m 403 329 3 e 405 250 x 408 307 b 410 329 2 e 411 306 6 b 412 297 γ 7 f 419 279 1 420 250 w 429 327 20 f 431 249 1 h 434 249 1 g 438 249 1 f 440 282 14 444 327 20 n 446 297 γ 7 h 450 280 9 451 250 v 452 250 s 453 250 t 454 288 14 461 250 p 463 332 6 b 467 282 9 476 330 1 e 477 276 1 d 483 306 16 e 484 309 8 l 488 288 12 l 488a 331 II 6 e 488b 331 II 7 a 490 301 7 e 491 301 9 492 301 7 f 496 282 10 500 277 13 e 508 309 8 m 509 293 4 e 513 335 5 d 517 327 20 e 519 365 27 520 295 7 d 522 307 1 e 523 299 9 d 524 297 6 b 528 331 12 e 536 331 II 9 d 540 281 3 e 541 276 1 b<sup>1</sup>, 310 I 1 b 542 276 1 e 545 277 12 e 551 330 1 f 567 295 3 b 569 250 r 572 331 16 a 577 330 1 g 602 293 2 612 331 II 4 b 615 297 10 624 286 14 625 281 8 a 629 279 21 632 304 2 l 640 294 8 644 280 11 b 660 327 20 g 662 327 20 h 666 293 4 f 668 330 2 d 674 331 II 4 e 678 328 20 i 693 330 1 d 706 328 20 j 712 295 7 e 713 330 1 e 714 281 6 a 717 331 II 5 b 731 281 1 b 746 281 5 753 294 11 e 754 297 5 a 756 299 9 l 757 294 α 7 b 758 297 5 b 764 281 7 b 776 297 4 f 777 299 9 i 778 299 9 j 779 309 8 n 786 326 10 788 295 5 b 794 306 16 b 799 299 9 e 800 288 12 n 809 297 5 f 810 297 1 b 811 297 1 a 825 306 17 b 835 281 8 b 836 281 4 a 843 279 24, 281 19 847 282 17 849 281 21 a 852 281 4 b 856 304 2 m 869 328 20 k 883 295 3 e 885 308 5 i 886 330 2 e 899 331 II 3 a 903 303 32 b 912 327 18 b 914 297 5 e 919 304 2 n 920 304 1 d 921 306 5 a 941 331 II 5 e 943 299 9 k 944 297 δ 8 e 947 297 5 d 948 297 δ 8 b 954 331 12 d 955 283 20 957 282 12 958 277 4 e 966 281 7 a 974 306 15 988 330 2 f 1000 327 17 b 1001 306 5 b 1002 306 8 e 1003 306 17 a 1004 304 2 o 1017 293 4 g 1049 309 8 o 1053 297 2 a 1083 335 5 e 1085 306 11 e 1095 297 γ 8 1112 297 4 d 1113 297 5 e 1118 330 2 g 1142 280 10 1151 345 3 d 1152 327 18 e 1155 328 20 l 1161 306 6 i 1163 327 18 d 1166 304 2 p 1167 304 2 r 1168 304 2 q 1170 330 2 h 1174 330 1 i 1178 387 D 3 b 1179 328 21 d 1180 297 δ 8 d 1190 250 q 1192 328 20 m 1198 288 12 o 1203 297 γ 7 g 1221 297 γ 7 l 1225 327 18 e 1251 330 1 h 1252 282 11 e 1257 281 11 d 1275 332 3 b 1300 327 18 a 1301 283 25 1310 326 1 b 1315 297 γ 7 k 1322 307 5 b 1327 293 3 b 1335 331 II 8 a 1368 365 23 1379 288 13 b 1380 302 14 d 1390 301 2 g 1391 301 5 1403 288 11 a 1405 327 19 a 1409 307 b, 309 8 p 1411 307 a, 309 8 q 1417 294 11 g 1419 307 g 1421 327 14 b 1430 294 10 b 1443 326 12 c 1444 288 10 e 1446 308 6 f 1447 307 b, 309 8 r 1460 331 II 6 a 1461 288 7 j 1465 327 20 e 1466 308 6 f 1467 303 31 1478 299 9 f 1482 327 20 b 1497 326 1 e 1500 307 a 1500b 309 6 o 1500c 308 5 p 1500e 308 5 f 1506 282 11 a 1523 387 II 5 1524 87, 288 11 d 1527 330 1 a 1530 288 11 b 1532 327 20 a 1535 302 14 e 1539 307 a, 308 6 g 1541 299 9 g 1547 309 9 d 1556 250 u 1557 326 1 d 1561 249 1 e d 1563 329 10 1565 249 1 e 1567 294 11 h 1574 302 15 e 1602 331 16 b 1621 331 16 e 1627 380 II 1 h 1655 331 III 5 1674-1675 276 1 g 1677 279 28, 284, 317 2 1678 276 2 i 1897 306 4 a 1925 295 4 1927 301 4 1928 306 3 2017-2019 290 9 d 2021 297 3 2024 304 38 2026 304 39 2034 304 37 2035 304 36 2041 304 35 2044 297 4 g 2087 294 α 7 a 2094 295 3 d 2095 290 14 2096 294 γ 2 a 2097-2098 290 9 d 2100-2101 290 15 2102 290 16 2104 292 17 a 2105 292 17 b 2106 292 18 a 2107 292 17 d 2108 292 17 e 2109 292 17 e 2110 292 18 b 2111 292 17 g 2112 292 17 f 2113 292 19 2114 290 7 a 2115 290 7 b 2116 290 8 a 2117 290 8 b 2118 290 8 e 2119-2122 290 6 2123-2127 290 4 2125 290 5 2128 290 1 a 2130 290 3 2132 290 9 a 2133 290 9 b 2134 290 9 c 2136 290 10 2137 290 11 2138 290 2 2139-

**2143** 290 1 b **2144** 290 12 **2145** 290 13 **2149** 292 20 a 331 II 10 a **2226** 330 1 k **2228** 303 25 a **2233** 297  
**2153** 292 21 a **2154** 292 20 c  $\gamma$  7 m **2234** 294 a 5 d **2264** 306 9 **2285** 306 14 **2289**  
**2155** 292 20 e **2156** 292 20 f **2157** 292 21 b **2158** 303 26 **2291-2292** 303 25 b **2293-2297** 301 12 e  
292 20 d **2159** 292 20 g **2163** 292 22, 318 4 c **2164** 292 22 **2316** 307 5 e **2322** 303 32 a **2328** 331 II 8 b & 11 **2329-**  
**2165** 292 23, 318 I 3 c **2171-2174** 284 1-2 **2188** 279 25 **2330** 331 11 **2331-2332** 331 II 7 c **2333** 330 11 **2370**  
**2190b** 284 4 **2192** 331 14 **2193** 331 15 **2194** 330 2 i 331 II 3 b **2372** 331 II 6 d **2427** 288 12 p.  
**2209** 330 1 j & 2 j **2223** 331 II 5 a **2224** 331 12 b **2225**



# INDEX III

## REFERENCES TO PLATES

This Index gives the references in the text of Volume I (Parts I-III and Appendix) to the photographs in Volume II. The references in Part IV are rarely included in the Index, since they are accessible through other indexes. If, for instance, a reader wishes to know whether Plate 67c is referred to in the text, he will not find it entered in this Index. But in the List of Plates he finds that the registration number of 67c is 2425. Turning then to the Index of References to Registration Numbers, he learns that 2425 is referred to on page 285 6 a. In this Index the number in **boldface** type gives the Plate; the letter following, the photograph on the Plate; the next number or numbers, the page or pages, at times with page subdivisions. These subdivisions are expressed by a capital letter and Arabic numeral, or by a Roman and an Arabic numeral. Thus, **59 d 20 (C 30)** means that Plate 59, photograph d, is referred to on page 20, division C, No. 30. Markings (as + or ×) on the face of the photograph are joined in this Index to the letter indicating the photograph. Thus, x on photograph a of Plate 3, referred to on page 145, is written: **3 ax 145**.

**1 a**, b 93 **2 a** 150 187 396, b 36 94 396 b1 98 b7 151  
**3 a** 94 98 146 396 ax 145, b 60 66 94 97 103 396 b1  
94 **4 a** 187 396, b 65 396, c 41 62 95(arrow), d 60 65  
67 97 396 d1 94 **5 58 a** 50 142 396 a8 140, b 50 397  
398 **6 a** 396 a8 140 a9 177 a10 8, b 143 396, c 47 50  
396 c9 177bis, d 142 145 396 d+ 146 **7 a** 40 50 397  
a6 127 a9 180, b 41 50 51 396 397 b9 169 180, c 50  
397 c9 169 180 **8 a** 61 101 110ter 396 a1 94, b 101 110  
397 b2 111 b5 128, c 58 61bis 97 101 110bis 397 c+  
102 c1 94 c5 112 128-9 c7 112 129, d 58 61bis 97 98  
397 d1 94 d9 177 **9 a** 101 396, b 107 397 b2 99, c 397  
c2 99 108 **10 a** 50 177 178bis 397 a5 128 a9 178, b 50  
178, c 47bis 50 397 c9 177 c10 185, d 47 50 397 d9  
177 d10 185-6 **11 a** 47 50 58 61 98 397 a1 97, b 50 397  
b1 94 b6 125 127 **12 a** 121(arrow) 159-160 398 a+1  
160 a+2 160 a+3 160 a+4 160, b 50 56 399 b10 187  
**13 a** 160bis 398, b 398, c 56 399 c7 159, d 122 399 **14**  
a 50 187 399, b 50 398, c 51 157 399 c+ 158 c2 107,  
d 50 398 **15 a** 40 50 56 399 a7 158, b 37 65 399 b+  
96, c 37 65 96 399, d 41 400, e 399 e6 125 **16 a** 40bis  
56 155 399, b 41 50 b6 125 127 **17 a** 50 170 174bis  
185 402, b 50 397 b10 185 **18 a** 10 50 65 402, b 10 21  
(31) 48 50 402, c 8 10 11 50 170 174 175 185 402, d 47  
50, e 47 50 186 397 **19 a** 47 50 397 a10 185, b 7 50  
61 170 191 402 b1 93 b10 186 **20 a** 37 50 397 a8 147  
149-150 a9 177 179, b 50 397 b8 149, c 402 c6 126,  
d 108 112 402  
**21 a** 59 63 99 103 108 112 402 a2 100 a6 123 126, b 405  
b3 119 b6 126, c 99 108 137 404 **22 a** 7 50 173 186  
397, b 8 50 397 b7 138 b10 173 b11 8 186, c 8 9 50  
c7 138, d 9 50 397 d7 138 d10 173 **23 a** 50 397 a7 138,  
b 47 50 53 404 b9 171, c 50 137 171 404 c7 137, d 59  
137 171 404 d5 130 d7 137 **24 a** 53 404 a2 113 a5  
130, b 50 173 397 b10 173, c 41 47 50 404, d 37  
41 47 50 404 d10 172, e 41 47 50 171 404 e9 172 **25**  
a 50 103 105 180 400 a6 103 a7 103 153 a8 153 a9  
103, b 50 103 105 180 400 b6 103 b7 103 154 b9 103  
**26 a** 400, b 103-5 400 401 b+ 106 b2 98 99, c 40 76  
103 105 180 400 401 c2 99 c3 103 **27 a** 104 400, b 105  
400 **28 a** 40 50 125 401 a6 127, b 118 125 401 b3 118  
b6 127 **29 57 a** 50 117 125 401 a6 127, b 117 125 401  
b3 118 b6 126-7, c 40 117 402 c6 127, d 117 402 d2  
108 d6 126-7 **30 57 a** 400, b 68 402, c 125 401 c3 118,  
d 125 401 d3 118bis, e 125 401 e3 118, f 402 **31 a** 50  
400, b 47 50 400 **32 a** 50 400 a8 149bis, b 50 400 b2  
108 b9 169, c 401-2 c+ 253, d 50 **33 a** 47 402, b 50  
400, c 58 400 401, d 116 401, e 116-7 401, f 37 100  
109 116 401 f2 100 **34 a** 50 183-4 401 403 a+ 183,  
b8 152, c 114 401, d 58 100 109 401 d2 109 **35 a** 50  
403 a9 169 182, b 403 b2 113 b5 131 **36 a** 47bis 114  
401, b 47 59 403 b3 118 b5 129 b8 139, c 47 **37 a** 403,  
b 38 59bis 78 b5 131 **38 a** 47 50 403 a2 100 109, b 50  
403 b2 100 109 **39 a** 50 404 a2 108 a9 169, b 59 404  
b2 108 b6 124 126, c 57 404 c6 124 126 **40 a** 404 a8  
139, b 50 404, c 47 50 404 c9 169, d 59 130 404 d2 99  
108 d3 119, e 59 130 404 e2 99 108 e3 119 e9 169 **41**  
a 50 59 405 a2 99 108 a5 130 a8 168 a9 168, b 50 405  
b6 123 126 b9 169 **42 a** 199 405, b 199bis 201 202bis  
405-6 b2 120 b7 164 **43 a** 405-6 a6 132 a10 199 200,  
b 406 b6 132 b7 165 **44 a** 201 405, b 120 201 405 b7  
164, c 405 c6 121 132 c7 121 165 c10 200, d 406 d6 133  
**45 a** 120 199 201-2 205 405-6 a10 204, b 201bis 202  
405, b7 164 **46 a** 38 202ter 406 a9 202, b 209bis 211 398,  
c 38 41 209 211bis, d 208 398 **47 a** 211-12 406, b 214bis  
407  
**48 a** 407 a7 165-6, b 213 407 **49 a** 407 a11 213, b 213bis  
407 b11 213, c 213bis 407, d 407 d7 165 **50 a** 214 216  
407, b 214 407, c 407 **51 a** 216 407, b 165 214 407  
**52 a** 188-9 399, b 220 407, c 220 408 **53 a** 37 41 400-1,  
b 41 405, c 41 400, d 39 40, e 37 77 402, f 37 405 **54**  
a 397, b 132 402, c 406, d 38 406, e 59 405 e2 99 e5  
130, f 405 **58 62 59 a**, b 55, c 46 250(7), d 8 20(C 30)  
21(n.7) 25(IV1) 46 176 251, e 11 21(31) 25(IV2) 46  
175 251, f 21 (n.3) 251(1) **65-66 62 73 h** 307(g) **74**  
c, h 309(2), g 306(7-9) **79 a-c** 223, e, f 9 25(IV14) 176  
**85 c**, d, f 7, g, h 5 **86 a** 7, b 7, c3 8, d1 10 d3 10,  
e1 9 26(IV16) e2 9 25(IV15), f1-3 11, g 10, h1 9  
25(IV14) **87 a** 10 a1-2 9, b 10, c 8 10, d 10 11 d2 11,  
e 10 e1 11 e2 8 11 e3-5 11 e6 8 11, f 7, g1-3 8, h 8  
**88 a** 8 a1-4 8, b 7, e1 8, d 10 d1 10, e1 10, f2 9, g2  
10, h1 12 h2 10 h3 12 **89 a**, b 10, c 192(III3), g 25(L),  
h 7 h1 18 (AINH-) h2 18 (GYMN-) h3 19 (ΦIAO-) h4  
18 (AΘHN-) **90 b1-2** 11 b4-10 11, e 8, f1 8, g16-17 20.

Electronic publication prepared by

[Kelvin Smith Library](#)

Case Western Reserve University  
Cleveland, Ohio

for

ETANA Core Texts

<http://www.etana.org/coretexts.shtml>

